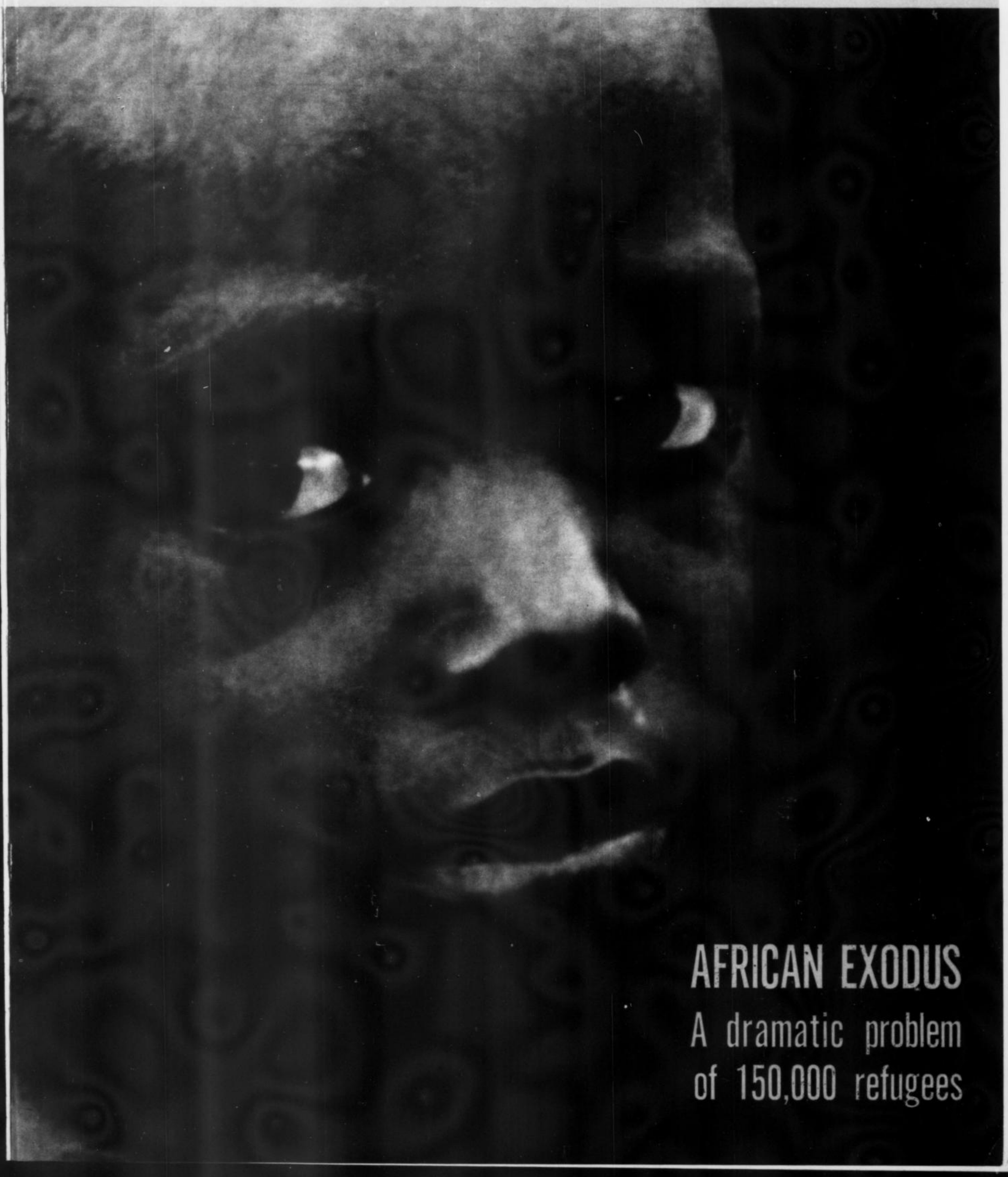
A WINDOW OPEN ON THE WORLD

# The UNESCO Courier

JANUARY 1963 (16TH YEAR) PRICE : 50 CENTS (U.S.)



## AFRICAN EXODUS

A dramatic problem
of 150,000 refugees

**TIMELESS ART OF THE GAULS.** This Janus-like head adorning a terra-cotta vase discovered in northern France in the 18th century is a remarkable example of ancient Gallic art. Excavations have brought to light many magnificent works of sculpture, ceramics, jewels and coins which reveal the great originality and richness of the ancient civilization of Gaul.

© Jean Suquet

The UNESCO Courier
A WINDOW OPEN ON THE WORLD

JANUARY 1963
16TH YEAR

## Contents

No. 1

PUBLISHED IN EIGHT EDITIONS

English
French
Spanish
Russian
German
Arabic
U.S.A.
Japanese

COVER PHOTO

This young African is one of many thousands of people who have fled from their homes in Rwanda. Most of these refugees have found sanctuary in the Kivu Province of the Republic of the Congo or in Uganda, Tanganyika and Burundi. But this African exodus has created a gigantic problem of rehabilitation and resettlement which the United Nations High Commissioner for Refugees and other international relief groups are trying to solve. (See p. 14).

UNHCR photo

Page

4 **A MUSEUM OF THE ALPHABET**
The story of writing as a key to mankind's progress
By David Diringer

10 **THE LIBRARY OF THE FUTURE**
How automation and electronics will change the world of books
By J. H. Shera

14 **AFRICAN EXODUS**
The dramatic problem of 150,000 refugees
By Stanley J. C. Wright

20 **A SPUTNIK'S EYE VIEW OF THE EARTH**
Space-vehicles take the measure of our planet
By L. Samsonenko

24 **GLOBES FOR SPACEMEN... AND SCHOOLS**

26 **UNESCO ART POCKET BOOKS**
A new venture in art publishing

27 **UNESCO IN RETROSPECT AND PERSPECTIVE**
By Jane Albert Hesse

28 **THE HIDDEN FACE OF THE CINEMA**
Pt. II. The vast machinery of film distribution
By Paul Léglise

33 **LETTERS TO THE EDITOR**

34 **FROM THE UNESCO NEWSROOM**

(M.C. 62.1.176 A)

**Published monthly by**
The United Nations Educational, Scientific and Cultural Organization
**Editorial Offices**
Unesco, Place de Fontenoy, Paris 7e, France
**Editor-in-Chief**
Sandy Koffler
**Assistant Editor**
René Caloz
**Associate Editors**
English Edition : Ronald Fenton
French Edition : Jane Albert Hesse
Spanish Edition : Arturo Despouey
Russian Edition : Veniamin Matchavariani (Moscow)
German Edition : Hans Rieben (Berne)
Arabic Edition : Abdel Moneim El Sawi (Cairo)
Japanese Edition : Shin-Ichi Hasegawa (Tokyo)
**Layout & Design**
Robert Jacquemin

THE UNESCO COURIER is published monthly, except in July and August when it is bi-monthly (11 issues a year), in English, French, Spanish, Russian, German, Arabic and Japanese. Sales and distribution: UNESCO Publications Center. U.S.A. 801 Third Avenue, New York 22, N.Y., Plaza 1-3860 (sole distributors of the U.S.A. edition). Second-class mail privileges authorized at New York, N.Y.

Individual articles and photographs not copyrighted may be reprinted providing the credit line reads "Reprinted from THE UNESCO COURIER", plus date of issue, and two voucher copies are sent to the editor. Signed articles reprinted must bear author's name. Unsolicited manuscripts cannot be returned unless accompanied by an international reply coupon covering postage. Signed articles express the opinions of the authors and do not necessarily represent the opinions of UNESCO or those of the editors of THE UNESCO COURIER.

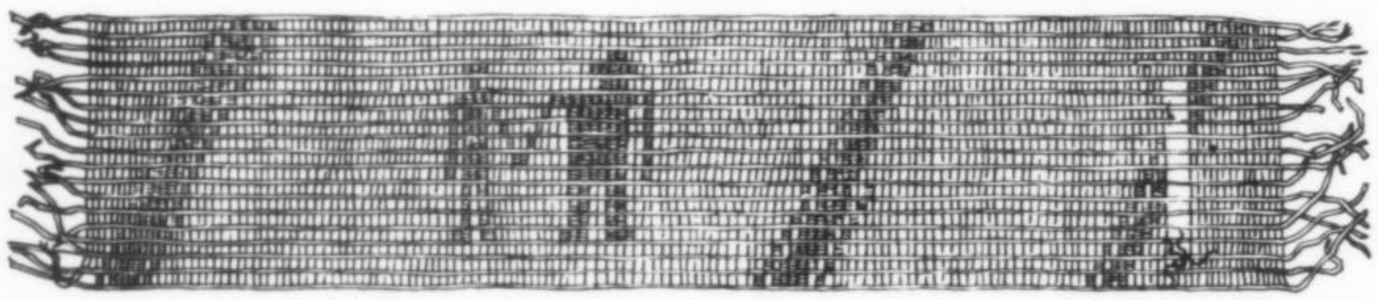
**The Unesco Courier is indexed monthly in The Readers' Guide to Periodical Literature.**

**Annual subscription (any edition): $ 5.00 ; Single copies : 50 cents.**

*All correspondence should be addressed to the Editor-in-Chief in Paris.*

# A MUSEUM OF THE ALPHABET

***by David Diringer***



Man has used all kinds of methods and devices for transmission of thought, images, symbols or arbitrary signs. One symbolic device was the "wampum" of the North American Iroquois Indians (left). It was a sort of broad belt formed by strings of shells or beads arranged in patterns according to the story to be recorded. The most convenient and adaptable system of writing used by man is the alphabet. Right, an example of one early alphabetic script, Aramaic. This Canaanite-Aramaic inscription is one of the few that have come down to us from between the 9th and 7th centuries B.C. Aramaic had little importance when a chain of Aramæan states stretched from Mesopotamia to western Syria in the 8th century B.C. The decline of these states, however, marked the beginning of Aramæan cultural and economic supremacy in Western Asia. Aramaic then became the "lingua franca" of the Near East. For more than a thousand years it was the vernacular of the Jews, and thus of Jesus Christ and the Apostles. It was probably the original language of the Christian Gospels.

WRITING is so much a part and parcel of our lives today that it is difficult to imagine a world in which writing is unknown. Yet for by far the greater part of his immense past man was without writing. Nor is it easy to realize in these days of popular education, that for a great part of the time since its invention, writing has been the prerogative of a few.

This was still the case in the not-too-distant past when mankind had already reached a fairly high level of culture. In some famous civilizations writing was cultivated almost exclusively by the priestly classes. So great was the magical power it exercised over the unlearned, that this precious possession was regarded as something beyond man's unaided powers of creation.

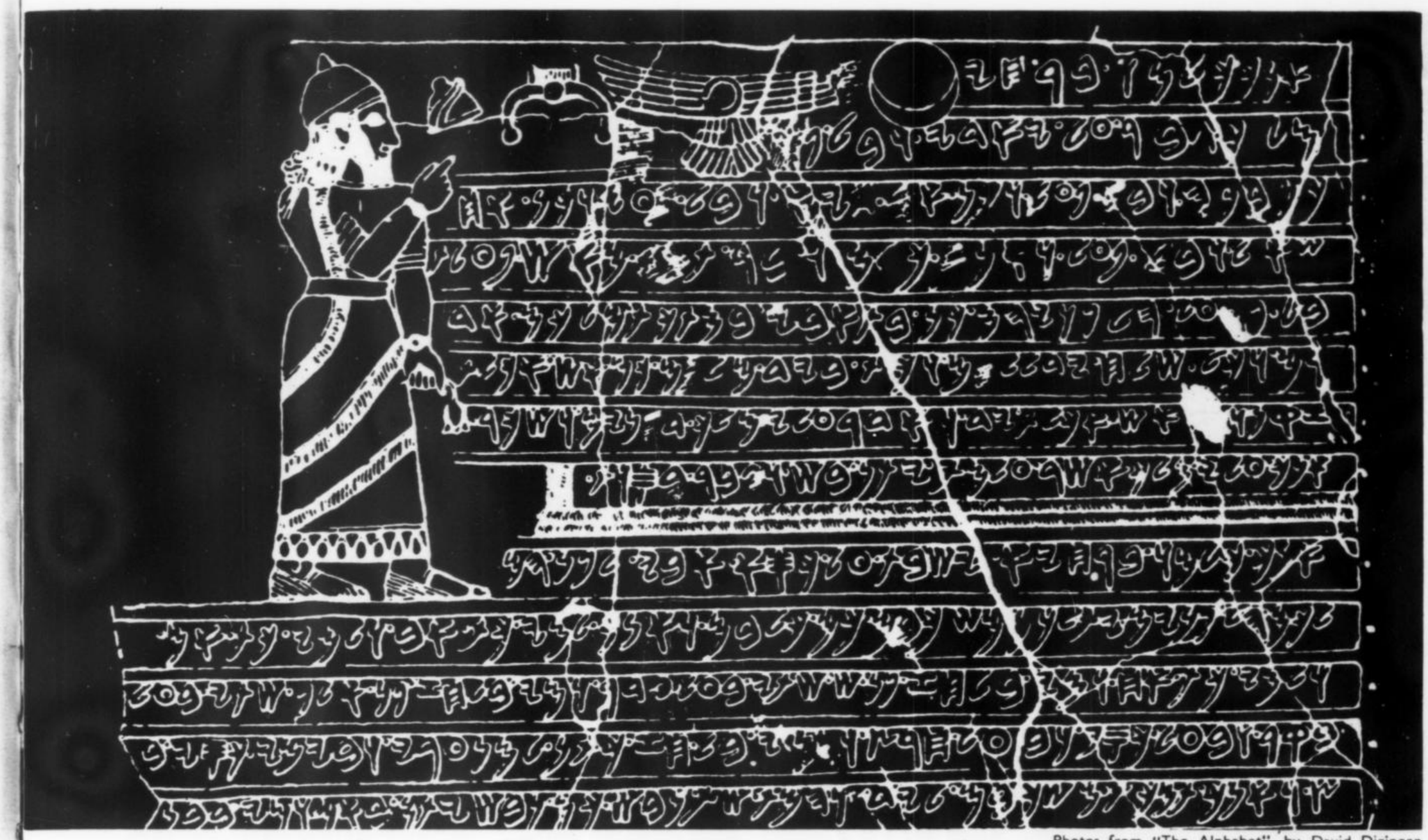
Ancient peoples held writing in such awe that its invention was frequently attributed to leading divinities. The ancient Egyptians assigned it to Thoth or Isis; the Babylonians to Nebo, sun of Marduk, who was also the god of man's destiny: the ancient Chinese to the dragon-faced Ts'ang Chien; the ancient Greeks to Hermes and others of the Olympians; the Romans to Mercury.

The Teuton god Odin or Wotan was credited with the invention of the Runes; the Celtic god Ogmios with the invention of the Oghams. The Aztecs attributed their writing to Quetzalcoatl; the ancient Indians to Brahma. Even amongst the Jews there was a tradition that considered Moses the inventor of the Hebrew script.

The position in more recent times is generally known. Even in the more advanced countries, up to almost yesterday people could not read or write. The assaults of the "awakening masses" on the ramparts of "privilege" have been a frequent theme in radical or democratic teaching. In an elementary sense writing—and here need one be reminded that the power to write includes the power to read—in effect, access to education was a focal point of privilege.

Briefly, as a key to knowledge and learning, writing was also a key to social and, in effect, to political power. Here we are not concerned, even if space allowed, to look at the vast complex of social, economic and political problems to which, over some hundreds of years, this position has given rise. The events and movements involved in the endeavour to solve them, are the stuff of modern history; nor least important is the shattering French Revolution with its reverberating cry "Liberty, Equality, Fraternity."

Much nearer to our immediate concern is the place of writing in the general picture. For it is the development of writing which forms the subject of the Alphabet Museum in Cambridge, England. As will have been gathered, the field is vast. The endeavour has been to cover all ages and all lands. In fact, the story is broadly traced in the co-ordinated assembly of material covering this wide field. The story, however, is more than the story of writing. It is a story which, it is thought, gives some insight into the history of man's social and spiritual development; for writing, especially under the dominion of



Photos from "The Alphabet" by David Diringer, published by Hutchinson, London

the Alphabet, is probably the greatest instrument which has helped Man in his upward struggle from a more or less tribal state.

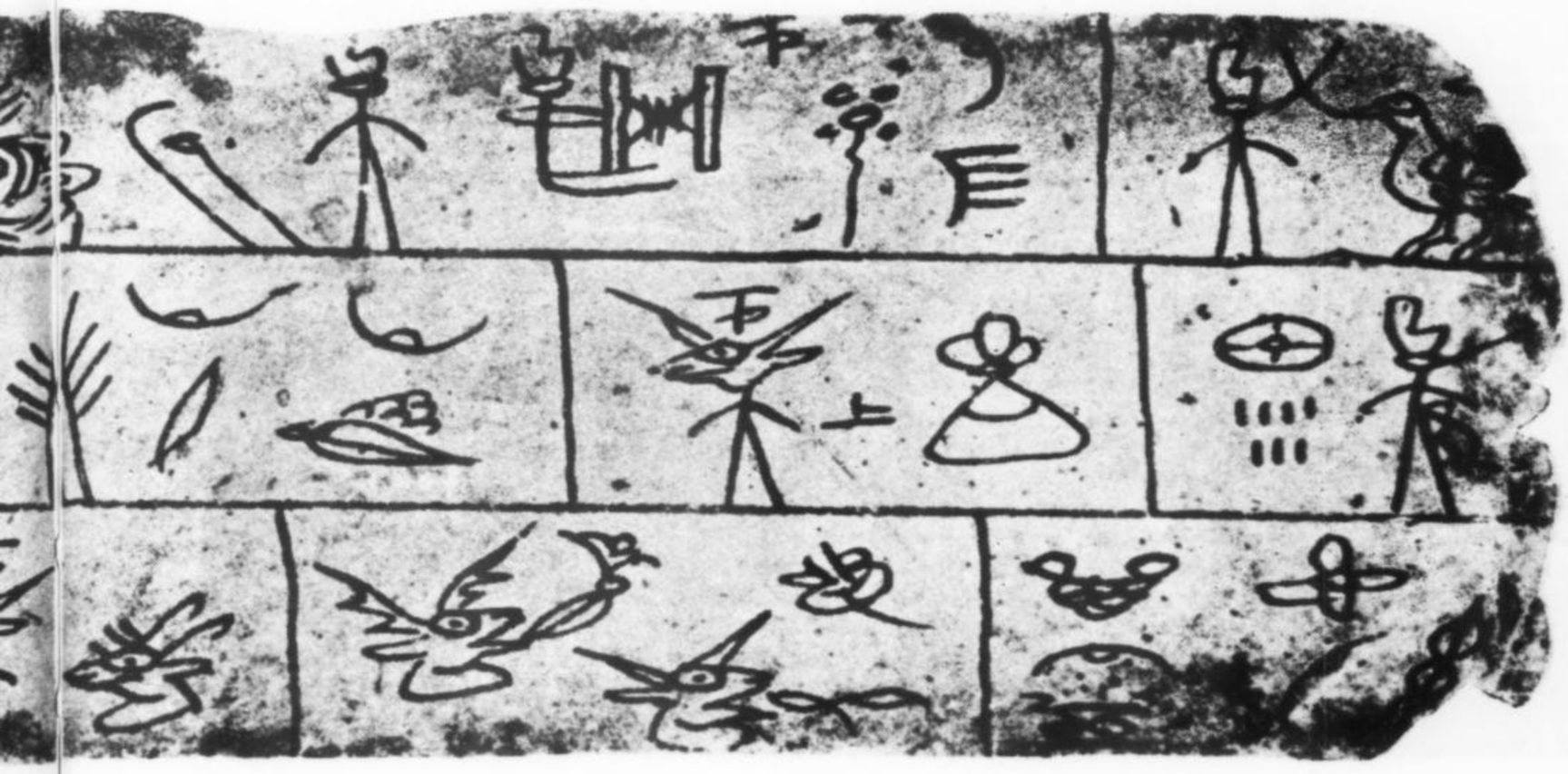
In this broad picture, the Alphabet has a special place. It is often a matter of great surprise to learn that the alphabetic system is distinguishable from writing in general. Indeed, for long the two were regarded as one and the same. The truth is that the Alphabet was invented long after the dawn of writing—roughly about the eighteenth century B.C.

In this article we can but draw attention to one or two aspects of the importance of the alphabetic system in the general history of writing. Its great virtue—due to its intrinsic phonetic principle—is its value in simplifying writing, reducing the number of symbols or letters to small compass—usually between 25 and 45 letters. So by lightening in no small degree the task of teaching and learning—in itself an immeasurable gain—it opened more and more widely the doors of education.

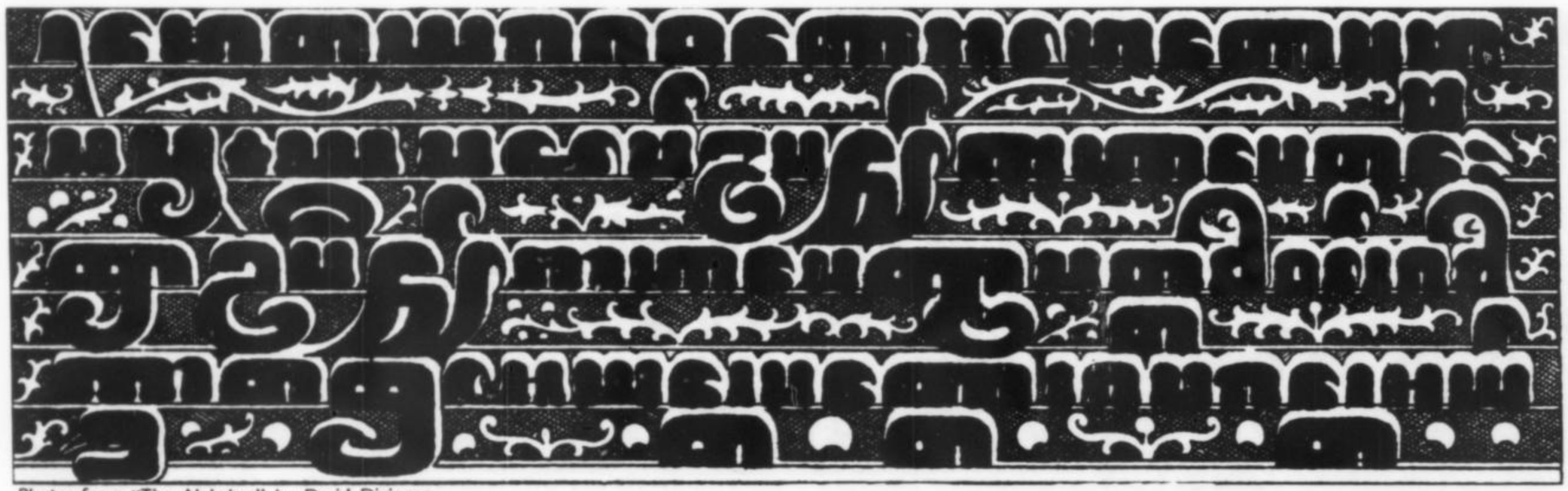
Today, popular education, with all that it means for the working of a true democracy, is a tribute to the alphabetic system. Not least of the merits of the system is its easy adaptability; so that it has, in fact, been adopted for almost every important language of the world. Even the Chinese have now officially adopted it.

Thus, we get some inkling of the part played by the Alphabet over an enormous field. Great thinkers such as Kant, Mirabeau, Carlyle, reflecting on human progress, have referred to the invention of writing as the real beginning of civilization. They were writing in an age when the fruits of the alphabetic system were already

CONT'D ON NEXT PAGE



In the history of writing there have been various scripts called Ideographic which are a developed form of picture writing. Some have disappeared but among those that are still known is the script used by the Na-khi, a people who lived an independent existence within the frontiers of China until the 18th century. No one knows when and how the script originated, but it is believed to have been created by *tombas* or medicine men. Left, the first page of an illustrated Na-khi manuscript.



Photos from "The Alphabet" by David Diringer

**'SQUARE' ALPHABET.** Pali is the language in which the sacred literature of Buddhism is written. Originally oral, it began to be put into written form in the 5th century B.C. The script employed for writing these books is not easily readable. The letters were painted with a broad brush and were correspondingly thick. Above, Pali script from the sacred book "Kammuwa".

# Writings on the wall

widely apparent. In our own day, an American scholar, H. Breasted, has been even more definite; in his opinion, writing was of greater importance in uplifting the human race than any other intellectual achievement.

TODAY, writing—and in this context we include such secondary forms as printing—has entered into the whole fabric of our civilization. Almost without our realizing it, it has become an indispensable part of our whole system. Not only in education, but in scientific and technological development, in the great and varied field of government, in all the vast and complicated mechanism for maintaining and promoting the well-being of large populations, writing—if only in the modest role of recording—plays an all-penetrating, if a strangely unobtrusive part. Nor should we forget that, in this role, it provides a basis on which knowledge is built up, giving it permanence and passing it on, with an assurance of accuracy, from one generation to the next.

Yet, astonishing though it may seem, the history of writing is the true Cinderella with learned men and layman alike. It has escaped formal study in most universities and secondary schools; great international foundations, which assist so worthily in so many directions, are not concerned with it; no important museum has thought it necessary to offer a comprehensive exhibition of the story of writing. Yet, almost every scholarly discipline touches upon writing at some point, often in matters of considerable importance.

It forms the basis for two significant branches of research: *epigraphy* (dealing with the decipherment and interpretation of ancient inscriptions) and *palæography* (dealing with the decipherment and interpretation of texts written on soft materials, such as parchment, papyrus, paper, linen, wax). The study of epigraphy has revolutionized knowledge of the ancient world and has led to the rediscovery and reconstruction of entire civilizations; the study of palæography has been of the greatest practical importance for ancient and medieval history, for the study of philology, for textual criticism, and so on. Moreover, Egyptology, Assyriology, anthropology and ethnology, Sinology, Indology, and many other branches of learning are based on particular sections of the history of writing.

Here we have something of the most far-reaching importance and yet, somehow, the most elusive. Like sunlight and the air we breathe, it is so "common," so "ordinary," and so well "understood" a thing that often it is not understood at all. The Alphabet Museum and Seminar aims to offer, or rather to help in offering, a corrective.

The Museum was formally opened by Sir James Pitman, M.A., M.P., on June 8, 1959; it assembles the results of many years' research by the present writer. The structure itself is a modest one, built in the rear of his private residence in Cambridge. Yet, in my humble judgment, it provides an archive more comprehensive than any so far attempted in this field. Indeed, as a "documentary" on the development of script, it is, I think, unique in the world.

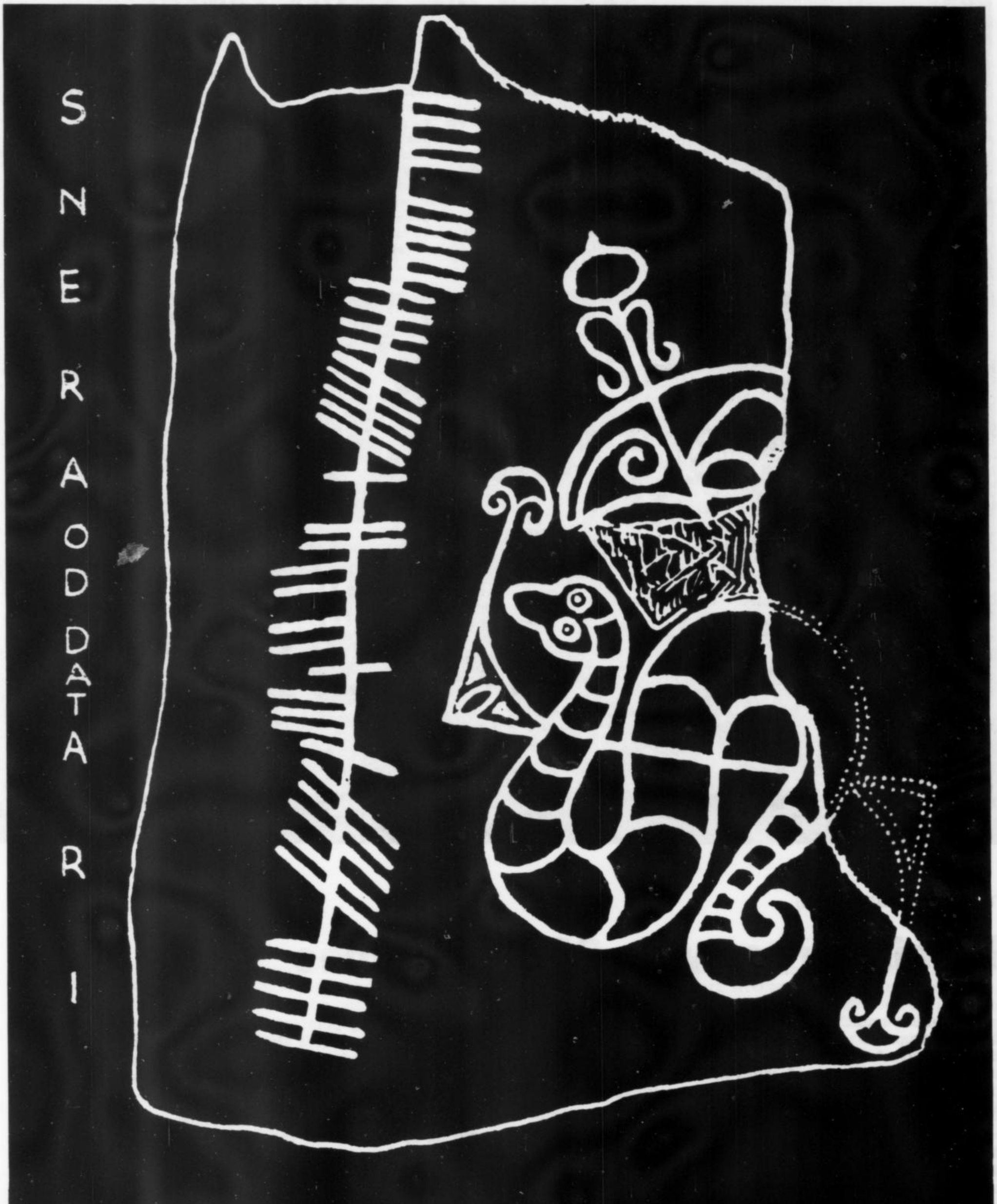
The large collection includes original inscriptions on stone and clay, casts of inscriptions, original manuscripts, photographs of many more, charts and maps, and lantern slides. The items are drawn from the world over, from North-East Siberia to Central Africa and Peru, from the Pacific Islands through Indonesia, India and Central Asia, through Europe to North America; and the age ranges from prehistoric times to the present day.

ITS main interest for the West-European student will doubtless be the wealth of material on the development of the Greek and Roman and related alphabets; for the East-European student, the abundant material on the development of the Cyrillic alphabets and their adaptation to dozens of other alphabets including Finnish, Turkish and Iranian.

For the Far-Eastern student, there is material on the development of the Chinese, Japanese, Korean, Mongolian and other scripts. The Indian and Indonesian student will find much on the development of the numerous branches of the Indian and Further-Indian scripts.

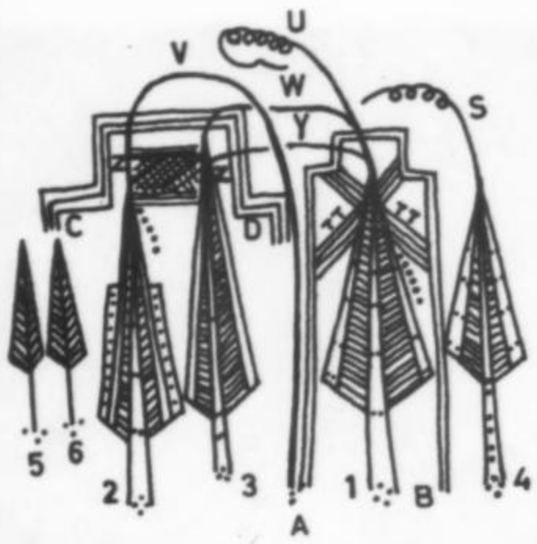
The Islamic student will find explanations of the origin and development of the numerous Arabic scripts, the Jewish and Old Testament student, on the development of the Early Hebrew and Square Hebrew scripts, and the Central African student, on the interesting memory-aid devices and the adaptation of the Latin alphabet to languages far removed in character.

CONT'D ON PAGE 8




# 'LINE' ALPHABET

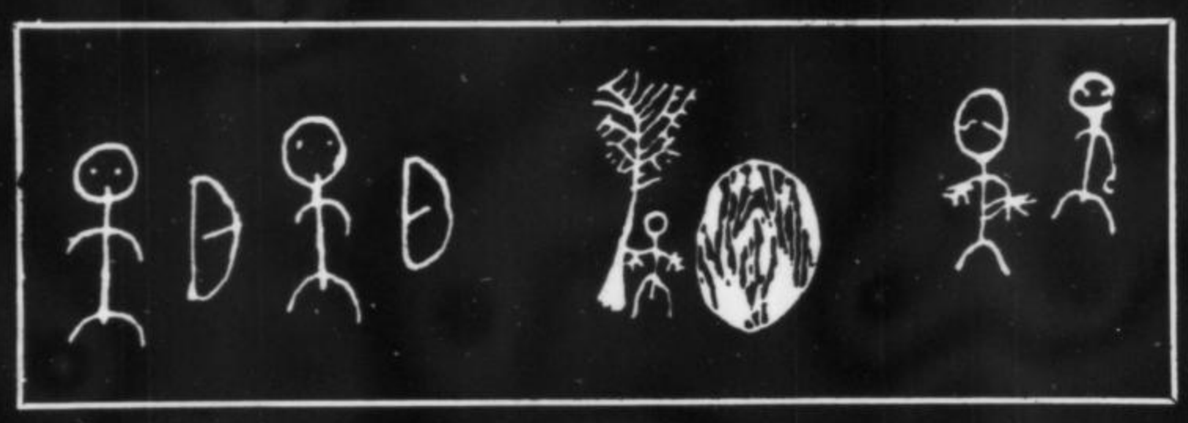
The Gaelic word "ogham" is applied to an ancient form of cryptic speech and alphabet peculiar to the Celtic population of the British Isles, mainly in southern Ireland and southern Wales, but also on the Isle of Man and in Scotland. Unknown in origin, the alphabet was very simple, consisting of 20 letters represented by groups of one to five straight or diagonal strokes or thick dots through or alongside a line. Above, a Pictish ogham found near Aberdeen, Scotland. On left are shown the Roman alphabet equivalents of the ogham letters The text, which is read from bottom to top, has not been translated. Pictish oghams were often accompanied by pictorial symbols—animals, birds, fishes, geometrical designs—that may represent a pictorial heraldry, such as the one shown here.




## SIBERIAN GIRL'S LOVE LAMENT

Shown in a strange diagram (left) is a Siberian girl's love lament written in ideographic script (symbols representing ideas) of the Yukaghirs of north-eastern Siberia. "I am alone my home," the text reads, "You have left and gone far away (to Russia). You love a Russian girl; you have married her, but yours is an unhappy marriage notwithstanding your children. I shall remain sad and will always love you, though there is another man who loves me." The umbrella-shaped symbols (numbered 1-6) indicate **persons.** Pointed lines on the top of 1 and 2, indicate "pig-tails," i.e. women; 2, wears a skirt wider on the top than No. 1: she is a Russian. No. 1 is in a **house,** shown by lines A-B; the other girl lives **far away** (i.e. in Russia), as indicated by the "house" C-D, of which only the roof can be seen. The man indicated by No. 3 is the **husband** of No. 2 (they live under the same roof), but they are not **happily married** (as indicated by the cross lines Z-Z), though they have **children** (5 and 6). Our heroine (No. 1) **loves passionately** (lines W-Y) the man No. 3, this love being **broken** (line V cutting lines W and Y) by the wife of her beloved; our girl will **continue** to love him (line U), although she herself is **loved** (line S) by another Yukaghir man, No. 4. Her great sadness is indicated by the cross-lines TT-TT.

SAYINGS OF THE EWE. Right, symbolic proverbs of the Ewes of West Africa. From left to right: (1) Two adversaries with bows and arrows—"two enemies cannot hold the field. (2) Man between the world (represented as a nut) and a tree, meaning "the world is a baobab"—"the world cannot be bent round, encompassed, changed, transformed." (3) The Ewe symbol for "I": Man indicating himself or holding hand on breast.



## STRANGE SCRIPTS AND

OLDEST WESTERN ABC. This tablet found at Marsiliana d'Albenga, Tuscany Italy, is inscribed with the 26 letters of the early Etruscan alphabet. It belongs probably to the end of the 8th or beginning of the 7th century B.C. and is the oldest Western ABC extant.

**THE ALPHABET** *(Cont'd)*

# Family tree with 350 branches

It is of no small help to see these numerous scripts in their appropriate places in the general picture of the development of writing. There is in fact here assembled, and scientifically arranged, what has been displayed, with perhaps greater picturesqueness, in large university halls and public galleries.

On entering the Museum, a visitor first sees a striking wall-chart, painted in colour—the "Alphabet Tree." It is a many-branched tree, dealing with some 350 alphabets and showing their relationships in the light of up-to-date research. Some scripts far removed geographically, are seen in surprisingly close relationship. Green leaves represent the many scripts in use today; brown leaves, the alphabets in effect dead.

Where particular scripts—because of their use for ritual or religious purposes only—are removed from the normal competition for survival (although assured of "life" at least as long as those who revere them endure), they are represented by leaves partly green and partly brown; in this way are shown the Samaritan and Coptic scripts. Likewise represented are the Welsh, Irish, Manx and other scripts only partly used.

An interesting point sometimes, causing great surprise, is clearly evident from the Chart: all alphabets, however widely separated geographically, even alphabets long abandoned, are probably descended from a common ancestor, the North-Semitic.

In this setting there is an endeavour to show how writing sprang out of the deep soil of human enterprise and mutual understanding; and how from the needs of social intercourse and mystical spiritual expression, the demands of superstition and magic, and of the higher religions, not to speak of those of trade and the economic pressures, there resulted a growth of primitive means of communication in various parts of the world.

Where the soil was favourable to the seeds of higher attainment, there developed more advanced systems of writing—these are symbolized by smaller trees on either side of the main tree; they are the non-alphabetic systems (scientifically known as "analytic," but generally though wrongly called "ideographic") of the ancient Egyptians, the Mesopotamian peoples, the Hittites, the ancient Cretans, the Chinese, the Mayas, the Aztecs, and so on.

Kemsley Picture Service, London

OLDEST LATIN TEXT. Professor David Diringer, author of our article, holds in his arms the oldest preserved Latin text: cast of the cippus (or small column) from the Roman Forum, dating from the late 7th or the early 6th century B.C.

# ANCIENT ALPHABETS

HOW OUR CAPITALS EVOLVED. The chart on the right explains how monumental characters developed from their North Semitic forms in the late Second Millennium B.C. down through Greek, Etruscan and Latin forms to give us modern capital letters.

Illustrations courtesy of Dr. D. Diringer

The syllabic scripts also claim attention, particularly those of the Japanese and the ancient Cypriotes. In the region of the tree-roots are indicated the probable or possible factors which gave rise to the particular scripts, or otherwise influenced their development; here, too, are references to the various theories on the origin of the Alphabet.

Wall panels show the development of the main writing-systems and of the individual alphabets. The panels are supplemented by a great variety of material, including specimens from manuscripts, photographs of inscriptions, alphabet-tables, maps and so forth.

In this vast field, one is all too conscious that much remains to be done and development in fact proceeds as opportunity offers. This applies, in varying degrees to almost all the 22 individual sections which, of course, cover the whole history of writing. Parts of these sections come within the sphere of "Writing and Art," and the department dealing with this, as well as one or two other departments, are being carefully studied with a view to development

The realization of so large a project of development presents formidable difficulties; but the effort seems worthwhile. In no other field of culture is the spiritual unity of Man so clearly manifest. In the early endeavour—where speech could not serve—to form a method of communication between individuals, in the effort through the ages to perfect such a method, an effort in which so many peoples have taken part, irrespective of age or clime, race, creed or form of speech, we see at work something more than a great co-operative principle. There is something which forms a basis for mutual respect between peoples. The Alphabet Museum, it is hoped, helps to make clear this underlying unity.

The "Seminar," an adjunct of the Museum, is the meeting-place for discussion of problems concerning the history of writing, and is open to members of the University and, indeed, to scholars everywhere. Facilities for study and research, including a specialist library, are being made available.

---

PROFESSOR DAVID DIRINGER, *curator of "The Alphabet Museum" in Cambridge, England, is a lecturer in the Department of Oriental Studies at the University of Cambridge. He is the author of* The Alphabet—*a key to the history of mankind. First published in* 1948 *by Hutchinson's Scientific and Technical Publications, this work is now being revised by the author in the light of the most recent scientific discoveries and will shortly appear in a new edition.*

■ How many books are published in the world each year?

■ What are the chief vernacular languages spoken in Africa?

■ I am 15 years old. Which books on space science should I read?

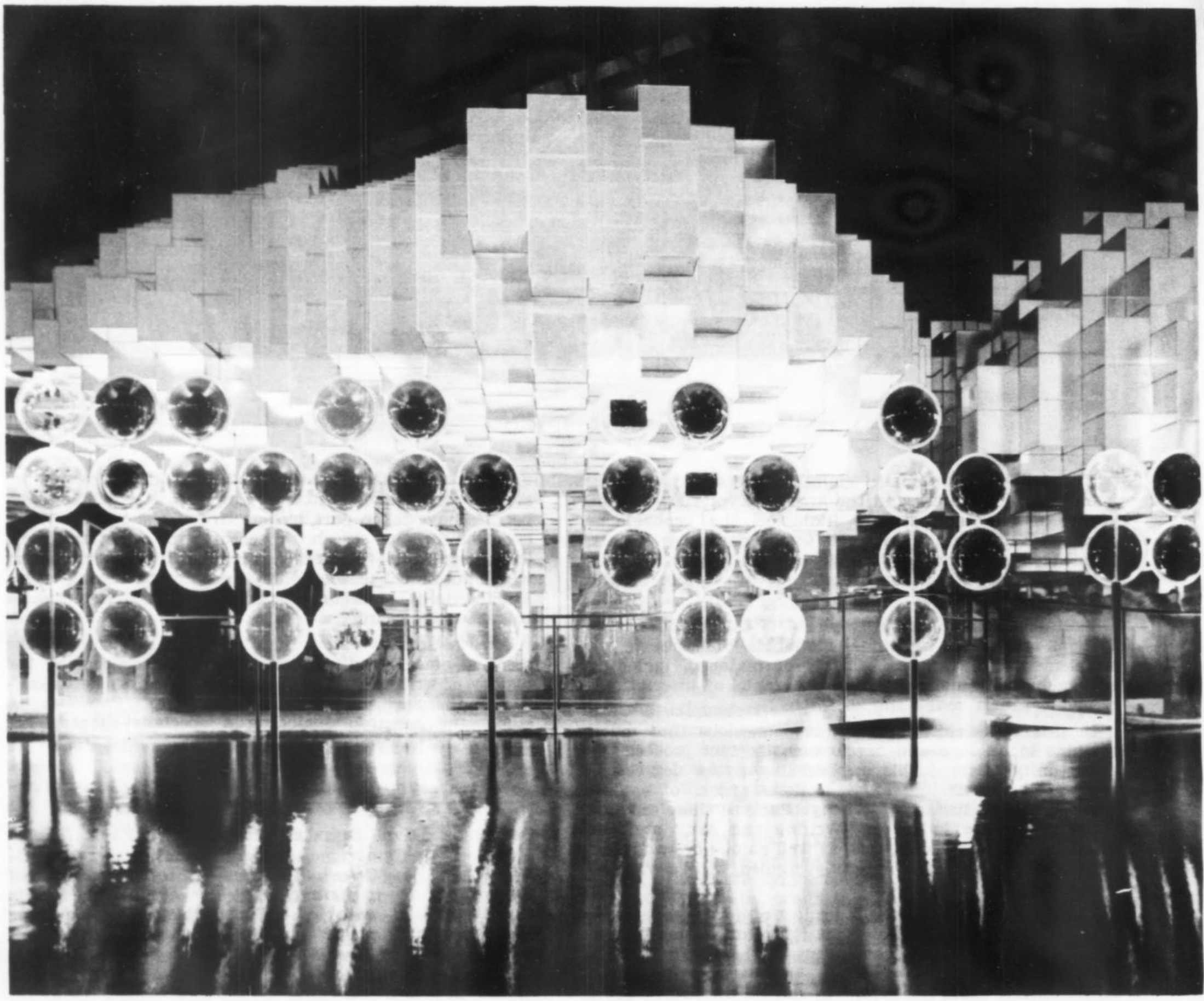
■ Who said: "The foundation of every state is the education of its youth"?

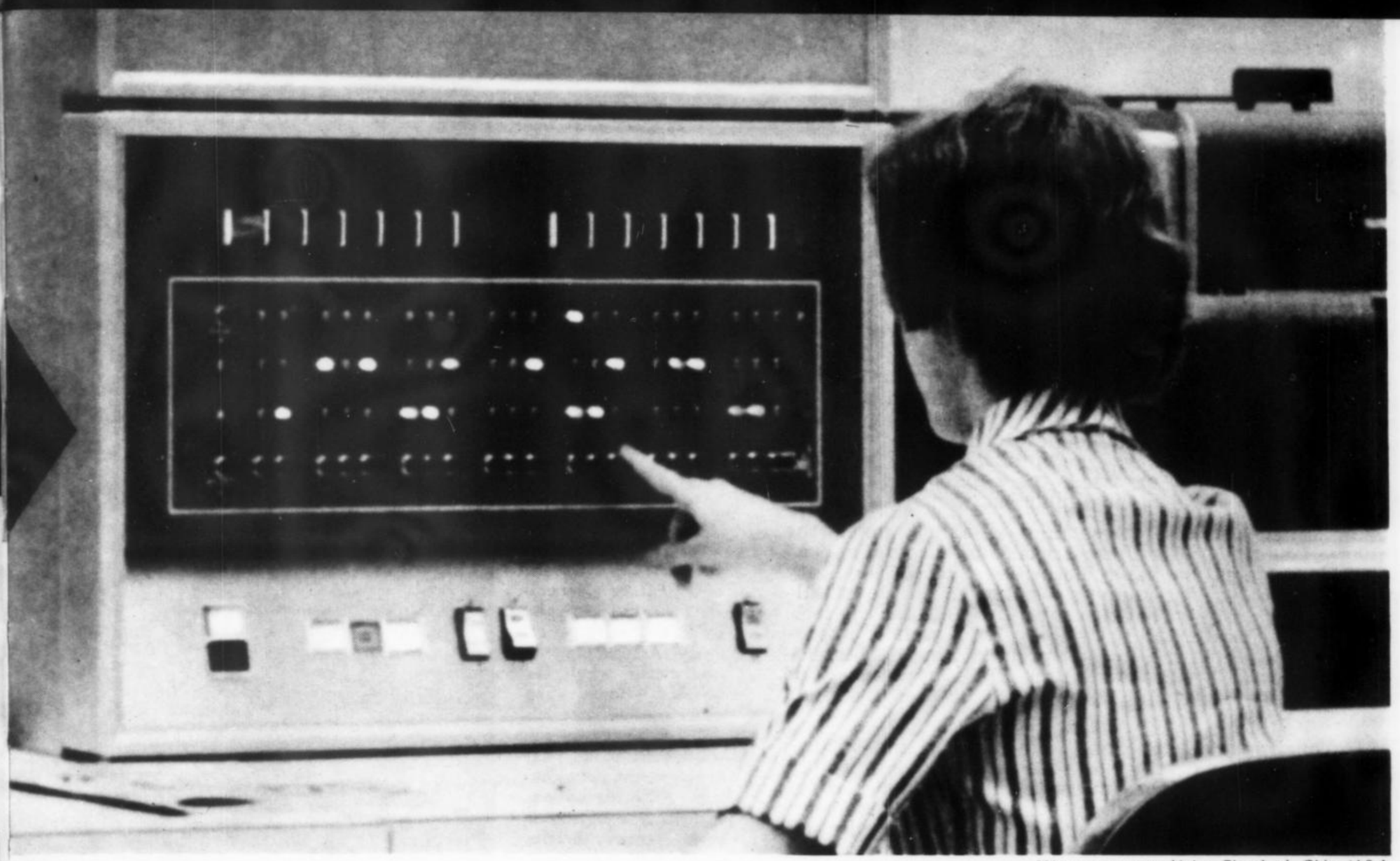
What will the library of tomorrow look like? A peek at what it may be one day was allowed visitors at the "Library 21" exhibition at the Seattle World's Fair last year. The chief keynote was electronics and automation revolutionizing methods of storing, retrieving and communicating knowledge to future library users. Visitors saw how specially "programmed" computers (right) can already provide

# The machine replies...

up-to-the-minute information on different countries, supply printed excerpts from the writings of the world's great novelists, thinkers and scientists, and offer specially "tailored" bibliographies on subjects ranging from the arts to space science according to the individual's age, education and degree of interest. The transparent spheres, below, tell the story of communication with three-dimensional models depicting cave painting, the development of writing, papermaking, printing, the telescope, and other wonders from among some of the newer media in the field of education.

© Pan American





Western Reserve Univ., Cleveland, Ohio, U.S.A.

# THE LIBRARY OF THE FUTURE

***by J. H. Shera***

MAN, in his long struggle up from savagery, has undergone many experiences and evolved many ideas which would be important to our own quest for a better life if we could but retrieve them from the past. But, because we do not yet possess efficient means of access to the store of recorded human knowledge, we have rediscovered that which was already known—re-invented the wheel, many times.

Worse, we have probably re-invented "square wheels," without knowing, or even suspecting, that they had long ago been rejected. A degree of prodigality in research may be unavoidable, and if properly controlled perhaps even desirable. But, contrary to popular lore, ignorance is not characteristic of a state of bliss and what we do not know can hurt us.

As early as 1937, Frederick P. Keppel, then president of the Carnegie Corporation of New York, sought an imaginary solution to the problem of improving man's recourse to the records of the human adventure by projecting himself into the library world of 1958, of which his imaginary librarian said:

> "I blush to think how many years we watched the so-called business machines juggle with pay rolls and bank books before it occurred to us that they might be adapted to dealing with library cards with equal dexterity. Indexing has become an entirely new art. The modern index is no longer bound up in the volume, but remains on cards, and the modern version of the old Hollerith machines will sort out and photograph anything that the dial tells it. . . we librarians must keep up with all these applications of science, and I admit it takes a fair share of our time to do so."

The almost uncanny accuracy of Keppel's prophetic vision will have been quite apparent to visitors to the "*Library 21*" exhibit at last year's World's Fair in Seattle, Washington, U.S.A. There, on the shores of Puget Sound, a computer, manned by professional librarians and technical assistants provided inquirers with short annotated bibliographies on selected subjects tailored to the education, age, and language capability of the individual patron. The computer was also stored with selected texts from the "Great Books of the Western World," to provide the visitor with quotations on appropriate subjects from the great classical authors.

In reality the Seattle exhibition was far less dramatic than the real developments that have actually taken place during the quarter of a century that has followed Keppel's prophetic words. Moreover, the importance of these innovations is not to be interpreted solely in terms of the machine, for automation is only the outward manifestation of the intellectual revolution that is taking place in librarianship today.

The most important phrase in Keppel's statement does not relate to the gadgets that he hypothesized, but to the assertion that "indexing has become an entirely new art." The bases of that art, Keppel might have added, are the semantic relationships among ideas, concepts, and words, and only incidentally the innovations in electronic circuitry.

One should not minimize the importance of the machine, for the machine has made a fundamental contribution in redirecting and refocussing the thinking of librarians concerning the intellectual processes which the management and efficient utilization of recorded knowledge involves. But the machine is still an instrument and nowhere is its instrumentality more apparent than in its role as a library catalyst.

Traditionally, library procedures and methods have derived from *ad hoc* assumptions concerning the nature of books and the ways in which they are used. Such library classifications as those of Dewey, the Library of Congress, and the Brussels Institute are based upon the implicit assumption that books resemble biological specimens which can be arranged in a hierarchical order of genus and species according to a major characteristic of their intellectual content. Similarly, the subject entries in the card catalogue are terms which are assumed to be not only meaningful descriptors of the content of books



CONT'D ON NEXT PAGE

# Electronics invades the world of books

but also the terms which the library user would associate with the subject of his search.

But because the standard library classifications and the subject catalogues have worked reasonably well, in some instances surprisingly well, librarians did not much concern themselves with research into the underlying theory of information storage and retrieval until the decade of the 1950's brought an unexpected proliferation in recorded knowledge that far surpassed the capabilities of conventional library and bibliographic instruments.

Simultaneously with these new demands upon the library came the rise, in other areas of intellectual endeavour, of automation, and librarians turned in hasty desperation to the machine as a potential source of salvation. Two early twentieth-century inventions, the Hollerith punched card and the micro-photograph or microfilm, seemed to hold the greatest promise, and much experimentation was begun in adapting these, in a variety of ways, to the storage and retrieval of recorded information.

Subsequently magnetic tape was added to the arsenal of the automated library. But despite the engineering skill lavished upon other devices, results fell far short of expectations because these mechanisms were not logically derived from an understanding of the intellectual process that takes place when the library patron searches a library file.

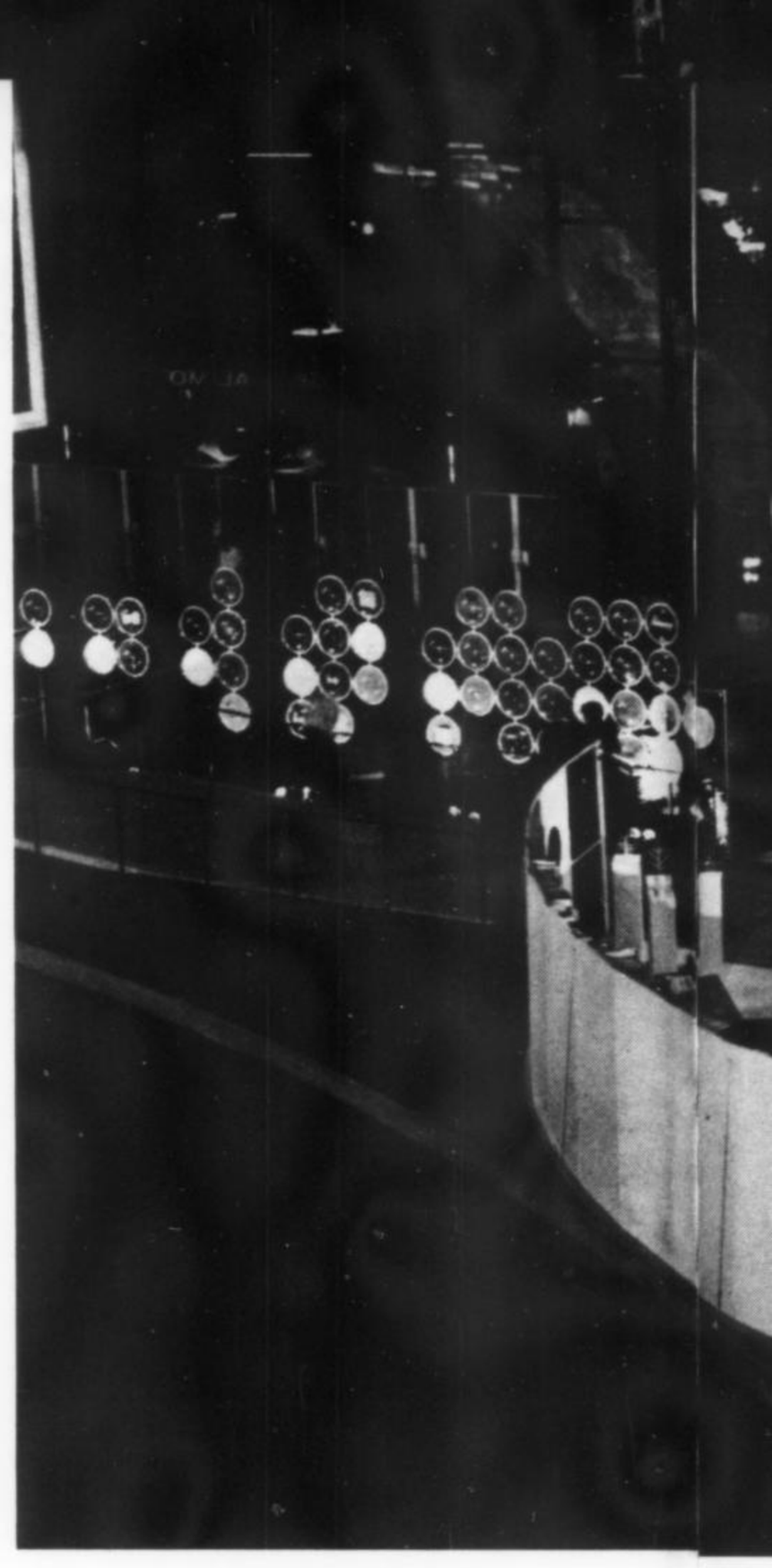
This charge of failure does not imply condemnation. Ill-considered as some of these experiments were they represented a necessary stage in the development of man's progress in improving library procedures. Every social innovation must shake itself free from a morass of misconceptions, false starts, and exaggerated hopes. Moreover, automation has already proved itself, perhaps in more ways than most people realize, as an effective means for facilitating certain types of bibliographic and indexing operations.

The preparation of concordances, which formerly was regarded as the work of a lifetime, can, through the use of punched-card or magnetic tape equipment, now be accomplished in months. A number of libraries are using similar equipment for the reproduction of catalogues and specialized bibliographies thus greatly extending the usefulness of their respective collections.

THE punched paper tape typewriter, such as the Flexowriter, with a print-out speed of more than six hundred pages an hour, offers possibilities for improving library and bibliographic operations that are only beginning to be fully realized. The Key Word in Context (KWIC) system now being used successfully by Chemical Abstracts Service for the superficial indexing of chemical literature employs high-speed computers to facilitate its operations.

The indexing and abstracting methods devised at Western Reserve University have been fully automated and are in daily use in an information retrieval service offered by the American Society for Metals. And, on a much less sophisticated level, libraries had, even before the outbreak of the Second World War, begun to employ limited automation in their acquisition and other business routines, as well as for the circulation records of their books.

Today, these limited uses of electronic and mechanical devices no longer seem strange or out-of-place in the library, and the time is doubtless not far distant when much more intricate mechanisms for the performance of much more complex library and bibliographic operations will be accepted by librarians and general public alike as standard library equipment. We should remind ourselves that not so very many decades have passed since the first library schools, before the typewriter became prevalent, regularly offered courses in a form of penmanship known as "the library hand."



**BOOKS ARE STILL BASIC.** The "Library of the Future" (general view right) designed by the American Library Association, by no means neglected books. Books and other printed materials will continue to remain basic to all education in the next century. The library was a prototype of six or seven core libraries which will serve vast areas of America in the next 100 years. These libraries will be linked together so that every important document, book and pamphlet will be available to every library user no matter where he lives.



In a world transformed by automation what, then, will be the form of the library of the future? Obviously the applications of automation to librarianship are so new and imperfectly understood that prognostication is dangerous. One can certainly say conservatively, however, that these new electronic mechanisms that simulate man's mental processes should give us new insights into the operations of the human mind and hence a better understanding of the ways in which the human being seeks out, acquires, and utilizes knowledge.

One also seems on solid ground in saying that machines are not likely to replace librarians any more than computers replaced mathematicians. On the contrary, these new devices will not only provide the librarian with means for improving the services he can render, but also will increase his understanding and appreciation of his role in society.

Finally, one can say with some confidence that the book is very far from becoming obsolete. To be sure, techniques for its miniaturization will doubtless become even more prevalent than they are today, and for purposes of *storage* the book in its traditional form does display certain marked disadvantages. But for *use* the book is so admirably adapted to the ends it serves that man has not been able to improve upon it since the parchment codex evolved from the papyrus scroll. The book is here to stay, and library architecture is not likely soon to deviate from a form making possible efficient shelving of books.

To those who are punch-drunk from the impact of scientific innovation, the library of the future is apt to be envisaged as a phantasmagoria of flashing lights, spinning tapes, and rattling teletypes. To be sure, rapid progress in facsimile transmission, mechanized character recognition, data processing, and trans-world communication will doubtless leave their mark upon the library, and one may properly expect to find in the library of the future a variety of electronic and other devices that today would have appeared to many as being out of place.

But the most striking characteristic of the library of the future will be not so much its physical form, as the intellectual activity that will take place within its walls, and this may be traced back at least as far as the great library established by the Ptolemies in Alexandria at the mouth of the Nile.

Seattle World's Fair

The library of the future, then, should be a true information centre—a collection of graphic records of every variety, assembled and used to the ultimate limits of its resources by a community of scholars educated both in one of the traditional academic disciplines and in the new science of librarianship and proficient in the scholarship of their new profession.

This is a new concept of librarianship only in its insistence upon the librarian as scholar and its emphasis upon the new tools which modern science will provide for improving the efficiency of his work. But before these tools can be designed and fabricated, and before the intellectual and functional dimensions of the library of the future can be identified and described, much important research into the physical and psychological nature of the library process must be completed.

Research in libraries has, from the beginning, been one of the major reasons for the creation of the institution, but research in librarianship is of such recent origin that its importance is not yet fully comprehended even among librarians. Librarianship as the proper subject of organized research must have brought to bear upon it the work of many disciplines in the physical, biological, and social sciences if it is to be rescued from suffocation by its very riches.

But however much the profile of the library may change under the impact of this research, the library as a service agency will remain, though the concept of that service may well undergo dramatic alteration in the transition from a passive organization to one that reaches out to the patron without waiting for his initiative.

In this the new media of communication can play a very important role, not only in bringing to the patron the required information in a variety of new forms, but also in expediting inter-library co-ordination by forging ever more strongly the bonds of co-operation that will eventually make available the total intellectual resources of a nation at any one point of need.

Architecturally, the library of tomorrow must be functional rather than monumental—a form in which change can be made quickly and economically in anticipation of rapid obsolescence. We do not build for the future by architecturally crystallizing or ossifying the present; change is the only constant. When the responsibilities of the librarian were regarded as primarily custodial, and preservation was generally accepted as his first concern, the library as mausoleum was architectually appropriate.

With the twentieth century came a new and more dynamic concept of library service. The library as a gothic cathedral expired with James Gamble Rogers' great anachronistic outcry at Yale. The new functionalism dictates modular construction—an empty shell with a minimum of bearing walls and fixed partitions. In fact, the library of the future may not be a single building, but a complex of interrelated structures which provide not only for the acquisition, utilization, and dissemination of traditional library materials, but also are true "information banks," dedicated to the fullest possible use of recorded human knowledge in whatever form. Already Johns Hopkins University is planning a new library building that will include a computing center for mechanized literature searching.

There is no limit to the potentialities of the library of tomorrow except the boundaries of the human imagination and our willingness to work. No longer is the library a social embellishment for the perpetuation of local or personal prestige. It is essential to the survival of society for the simple and obvious reason that our culture has become so complex and interdependent within and among its constituent parts that it cannot survive without constant intellectual nourishment.

Knowledge, then, is the life-blood of our civilization, and the library of the future may well be regarded as the instrument by which its continuing circulation of knowledge is maintained. What goes on, then, in the library of the future may or may not be outwardly spectacular, but it will probably influence substantially the course of the human adventure.

---

Dr. JESSE H. SHERA *is Dean of the School of Library Science at Western Reserve University, Cleveland, U.S.A.*

# THE DRAMATIC PROBLEM OF 150,000 REFUGEES

*By*
***Stanley***
***J. C. Wright***

**PEOPLE WHO WAIT.** Like many thousands of their fellow people from Rwanda, this mother and her son (left) have found sanctuary, but the sadness in their eyes tells of a home lost perhaps forever and doubts about the future. Right, other refugees climb into a truck sent by the League of Red Cross Societies which will take them to one of the four resettlement centres in the Kivu Province of the Congo. So far over 21,000 refugees have been taken care of in these centres.

UNHCR photos

# AFRICAN EXODUS

**During recent years, the Office of the United Nations High Commissioner for Refugees (UNHCR) and the League of Red Cross, Red Crescent, Red Lion and Sun Societies have been carrying out a number of joint operations. From 1957 onwards they gave relief and maintenance to the Algerian refugees in Morocco and Tunisia, an operation which ended with a repatriation movement to which both organizations lent active assistance. Elsewhere in Africa, in Togo, UNHCR and the League joined in giving relief to a small group of exiles needing reestablishment. In the Congo (Leopoldville) an operation was undertaken in 1961 to help over 100,000 refugees from Angola who could be settled locally. At present, UNHCR and the League are trying to solve the problem of the refugees from Rwanda in the Kivu Province. Parallel to this action, UNHCR has been taking an interest in the Rwanda refugee situation in Uganda, Tanganyika and Burundi. (On July 1, 1962, the Trusteeship territory, Ruanda-Urundi, administered by the Belgian Government until June 30, 1962, became independent as two sovereign states—Rwanda and Burundi). In all these undertakings, the two organizations plan and work together at all levels. The League relies on support from its national societies and accepts the responsibility for storing and distributing relief and, in some cases, the co-ordination of activities in the field. UNHCR for its part maintains liaison with governments, seeks funds for projects from governmental and private sources, and delegates "Chargés de Mission" who work in close co-operation with League operational personnel in the areas concerned. Both organizations are of a non-political and a purely humanitarian character.**

A band of perhaps a hundred people have gathered in the shadows of a cluster of banana trees. They are sitting quietly on the ground by a primitive sandy track, waiting. Among the tall men and women are several almost too ill to move, their bodies emaciated by starvation and disease. Many babies and children are frighteningly thin with swollen bellies. They are refugees from Rwanda, who have come to the Kivu Province of the Congo.

But soon the ordeal of these "waiting people" is over. Three-ton trucks painted with the emblems of UNHCR and the League of Red Cross Societies pick them up and, after a five to ten hours' journey over primitive tracks, bring them to one of the four resettlement centres in the Kivu. There they find medical aid and food. Later they will be given the means to start a new life.

The exodus of Rwanda refugees began when political unrest led to violence between the two major tribes—the Batutsi and the Bahutu. The Batutsi, a tall, handsome people, came to Rwanda some six hundred years ago, probably from far away Ethiopia. Although forming even today not more than sixteen per cent of the population, these shepherd warriors subjected the local tribes of the Bahutu and set up a feudal society both in Rwanda and Burundi under separate kings called Mwami. During this century, under the impact of education and, later, of the movement towards independence, the social structure in both countries underwent certain changes.

In Rwanda, where the segregation of the two peoples was maintained over a longer time than in Burundi, the Batutsi, as the ruling class, came to be identified with the more traditional and conservative form of government. When the king was deposed in January 1961 and Rwanda became a republic, political clashes led to tribal violence. Hundreds of people were killed, villages burned and crops and cattle destroyed.

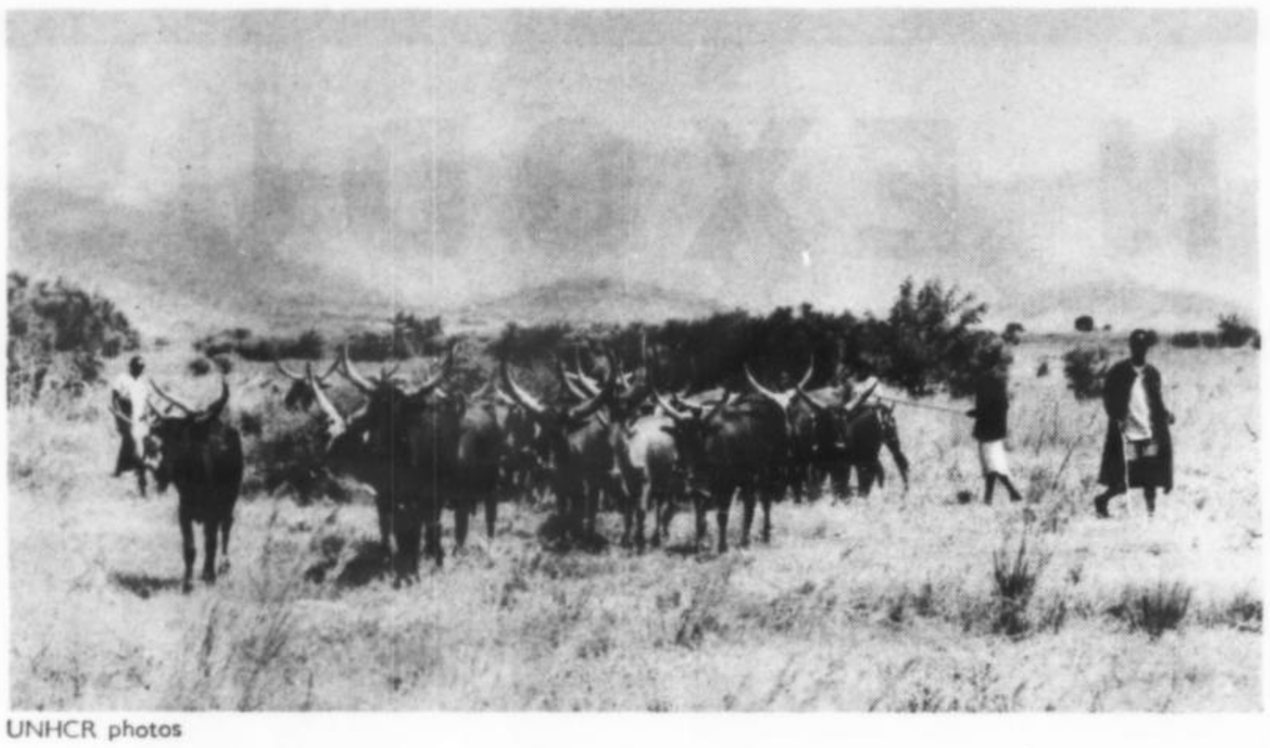
An exodus began which culminated in a tragic flight of over a hundred thousand Rwandese. By September 1962 it was estimated that 150,000 refugees had found shelter in the countries bordering on Rwanda: 60,000 in the Kivu Province of the Congo, 40,000 in Burundi, 35,000 in Uganda and 15,000 in Tanganyika.

Some of these refugees, particularly those in Uganda, brought with them their animals, the long-horned cattle so reminiscent of the oxen on Egyptian bas reliefs. The overwhelming majority, however, found themselves destitute, without means of livelihood.

At the time of this exodus, Rwanda and Burundi were passing through one of the periods of famine characteristic of the area. The administration had distributed the existing reserves to those refugees who had earlier sought protection near the Catholic missions inside both countries. This meant that the fleeing populations were weakened and open to disease.



CONT'D ON NEXT PAGE



UNHCR photos

**FLIGHT** for over 100,000 refugees from Rwanda began in November 1961. Some, particularly those who reached Uganda, managed to bring with them their animals (left) long-horned cattle reminiscent of the oxen on Egyptian bas-reliefs. But the immense majority found themselves destitute, without any means of livelihood. Right, at the Kalonge reception camp in the Kivu Province, refugees queue up for manioc, beans and palm oil.

# 'We are ready to learn and work'

The Kivu also was passing through a difficult phase as a result of the administrative dislocation in the Congo. Access to the large Ruzizi Valley, for instance, was barred by rebel soldiers, thousands of refugees found themselves in unhealthy marshland cut off from every form of help. The Batutsi used to live in the mountains; they were not used to the heat, nor the unhealthy conditions in the lowlands. They were therefore particularly vulnerable to malaria. No statistics exist regarding the death rate but starvation, intestinal diseases caused by polluted water, malaria and scabies took a very heavy toll.

When in March 1962 a joint fact-finding commission (UNHCR, the League of Red Cross Societies, UNICEF and UNOC) succeeded in reaching this area they reported "the general health situation (among the refugees in Kivu) to be bad and very bad, with the exception of areas south (the Ruzizi Valley) where the situation must be considered catastrophic."

Indeed, in one of the villages visited by the fact-finding mission a family of eight was completely wiped out in the course of a fortnight. Said Dr. Voigtberger of WHO in a report to Geneva, "the refugees have become a reservoir of infectious diseases that threatens the entire region."

The situation, although extremely precarious, was not so tragic everywhere. The refugees who had gone further inland and reached the Masisi territory had found temporary work and help from the settlers who had migrated in earlier years under plans to alleviate the overpopulation problem in Rwanda. These settlers, though Bahutu, received the Batutsi in their midst and allowed them to work on their land. Those who had stayed in Goma, Bukavu and Uvira, the three main Kivu towns near the border, received occasional assistance. Others in rural areas found work on local farms and plantations, but even among them there was occasional famine.

When the UNHCR "Chargé de Mission" in the Congo visited the Kivu in December 1961, there was not only an urgent need for relief but also for action which would give the refugees a possibility to move away from the unhealthy areas and to resume life in more normal conditions.

At the request of UNHCR, sixteen tons of food and three thousand pounds of medical supplies were flown in by UNOC planes from Leopoldville. Forty-five tons of food were shipped by river to Stanleyville and carried by UNOC trucks along the one-thousand kilometre tracks to Goma (the distance from Geneva to Rome).

The Oxford Committee for Famine Relief in the United Kingdom made £10,000 available to the Norwegian Protestant Mission in Bukavu so that food supplies could be bought locally, and later sent another £10,000 to the Swedish Protestant Mission in the same town. The Swedish Mission in Rwanda sent four tons of food to Goma when the supplies of the Catholic Mission there ran out. Eighty tons of milk from the United States' surplus food were carried by UNOC trucks from Usumbura in Burundi to the Kivu Province.

In the meantime, the League of Red Cross Societies had agreed to a joint action with UNHCR. A plan was drafted to create resettlement areas in the mountainous areas of the Kivu and, with the full approval of the Prime Minster of the Province, Mr. Miruho. It was put into operation almost overnight.

Under the Belgian Administration, several attempts had been made to establish Rwanda farmers in the highlands. An organization, the MIP (Mission d'Installation des Populations), had been created which for several years had been entirely in the hands of Congolese officials. On its own initiative it had begun to help refugee families by assisting with their establishment in Northern Kivu, but their efforts had been hampered by lack of food.

On the strength of this experience, it was decided to create four resettlement centres—in Iuhula, with the help of the White Fathers; in Bibwe with the MIP; in Kalonge with the Norwegian Misson, and in Lemera with the Swedish Mission. These centres were all situated in thinly populated areas where the implantation of refugees is unlikely to cause any social, economic or political disturbances in the future and where the land offers excellent prospects for agriculture.

It is actually wrong to speak of "centres." Bibwe, for instance, which has already received more than 5,000 people, is now composed of six villages and more will be created as the number of refugees increases. Each family has received four hectares of land and there is enough virgin forest around to carve out a four-hundred hectare tea plantation which is one of the projects of the programme.

Practically every day one or more lorries bought with UNHCR funds by the League of Red Cross Societies picks up groups of refugees in Goma or from the border areas. Every day also refugee families arrive on foot, some having walked over a hundred miles.

Upon arrival they are registered and given temporary shelter in communal accommodation until they can build their own huts (which takes about two weeks). They

receive an average of three kilos of food per person per week (manioc, beans and palm oil). Each family is allotted a machete, a hoe and some seeds for immediate planting.

A beginning has been made with community development plans: the creation of a tea plantation, the establishment of a saw mill, the setting up of a community store where the refugees will eventually be able to buy essentials (seeds, tools, fertilizers, etc.), and the organization of the sale of handicrafts which will help to maintain the 130 widows and their children who have come to Bibwe.

There is a heartening spirit of pioneering among the refugees. Several students who studied in Europe or who were in technical schools in the Congo when events in Rwanda prevented their return, have come to Bibwe to settle provisionally. It is they who have built the huts for the widows, the two schools and a mission house. Several are acting as unpaid teachers to the 350 children of school age.

Right now activities are concentrated on planting manioc, sorgo, maize, potatoes, sweet potatoes and beans —the staple diet of the population. By early 1963, the refugees, if all goes well, ought to be completely self-supporting. In two years' time, thanks to the community plans, the standard of life in the new villages will rise above subsistence level and allow for further development.

Many of the refugees are, in fact, looking ahead with quiet hope to better times. They want to build houses of stone, give their children a chance to learn better methods of agriculture, raise the standard of health. "There is no reason why we should not do as well as the planters around here," says Brother Alphonse, a Catholic monk, himself a refugee. "It may take time, but our people are ready to learn and work."

The part taken by the Congolese and the refugees themselves is indeed one of the important aspects of the resettlement of the refugees in the Kivu Province. They are actively associated with the drafting of plans, work out all the administrative details, and are fully responsible for the execution of the projects. To them, the presence of UNHCR, Red Cross League and UNOC officers is a guarantee of continued support and friendly help.

So far, the contribution of the international community to the Kivu operation has been comparatively modest, even if without it the operation could not have been undertaken with any chance of success. UNHCR has already contributed $70,000, UNOC, $50,000, UNICEF $24,000, the Oxford Committee for Famine Relief $56,000, the League of Red Cross Societies $25,000, to which must be added United States' surplus food, and private donations. At least $65,000 more will be required to complete the operation. The League has two officers in the areas, a Swiss and a Dane.

So far, over 21,000 refugees have been resettled in the four centres. Their number may rise in the next few months to 40,000, possibly even more. Within less than a year they will have travelled the road from starvation to plenty, a short road indeed, thanks to their own energies, the understanding and active assistance of the local chiefs, and support given by the international community.

---

STANLEY J. C. WRIGHT *is Chief of the Information Section, Office of the United Nations High Commissioner for Refugees, Geneva.*

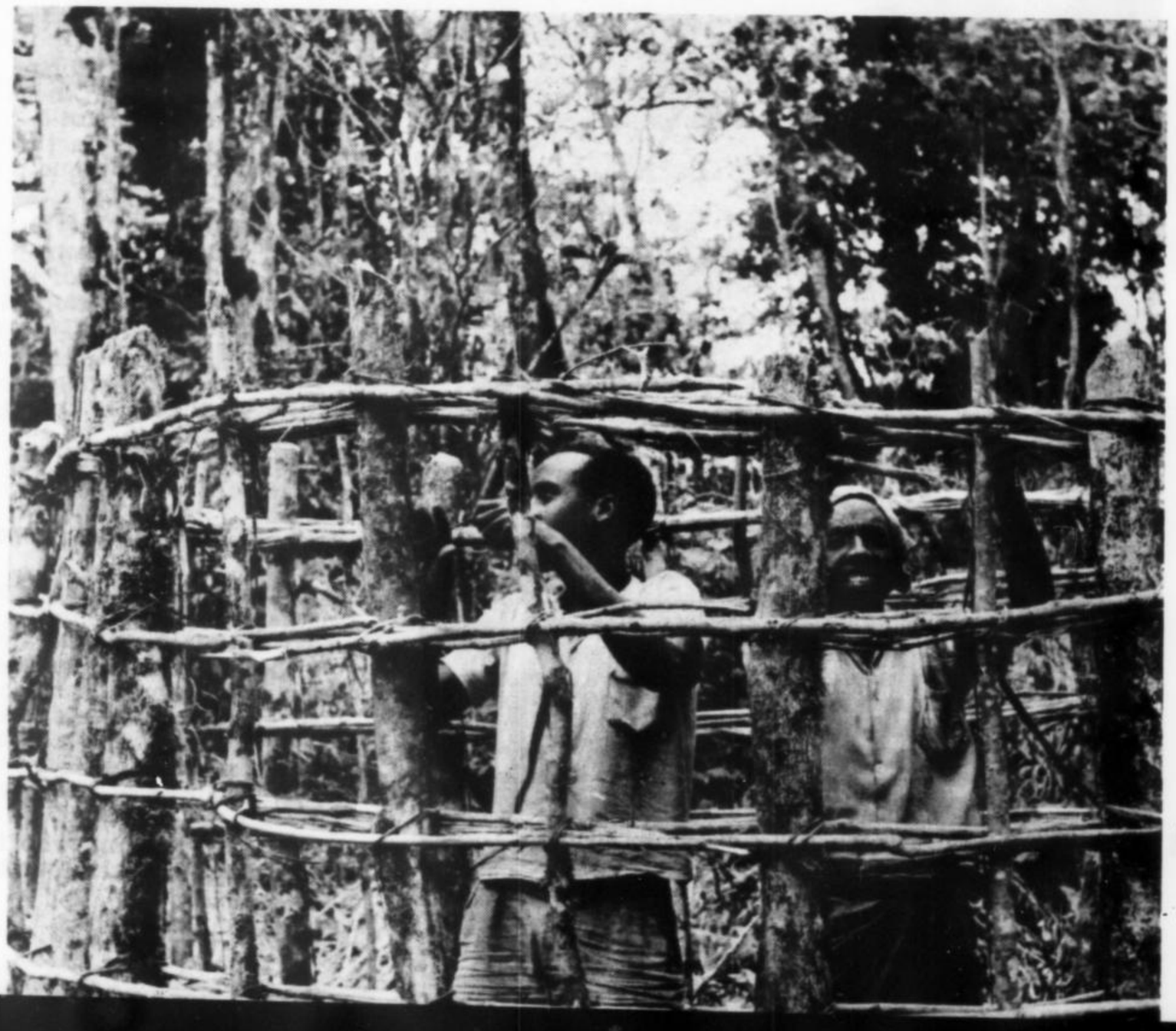
Leaving fear and famine behind them, refugees from northern Rwanda set off on the road to a new life. One group (left) climbs aboard a Red Cross truck which will take it to the Bibwe reception camp in the Kivu Province of the Congo. Below, a small girl, wearing a makeshift dress cut from a food sack, patiently waits her turn. A few hours later, greeted by shouts and waves of welcome (below left) the group arrives at the camp of the Reinstallation Mission. The refugees are determined to build themselves a new life and become self-supporting. At the weekly food distribution (below, centre) the men select the best beans for planting. As the framework of a new home takes shape (below right) hopes rise and smiles broaden. After work is over there is time to enjoy traditional festivals and dances (right). The land is good. New crops will soon raise their heads. Life once again begins to take on a real meaning.

# ON THE ROAD...

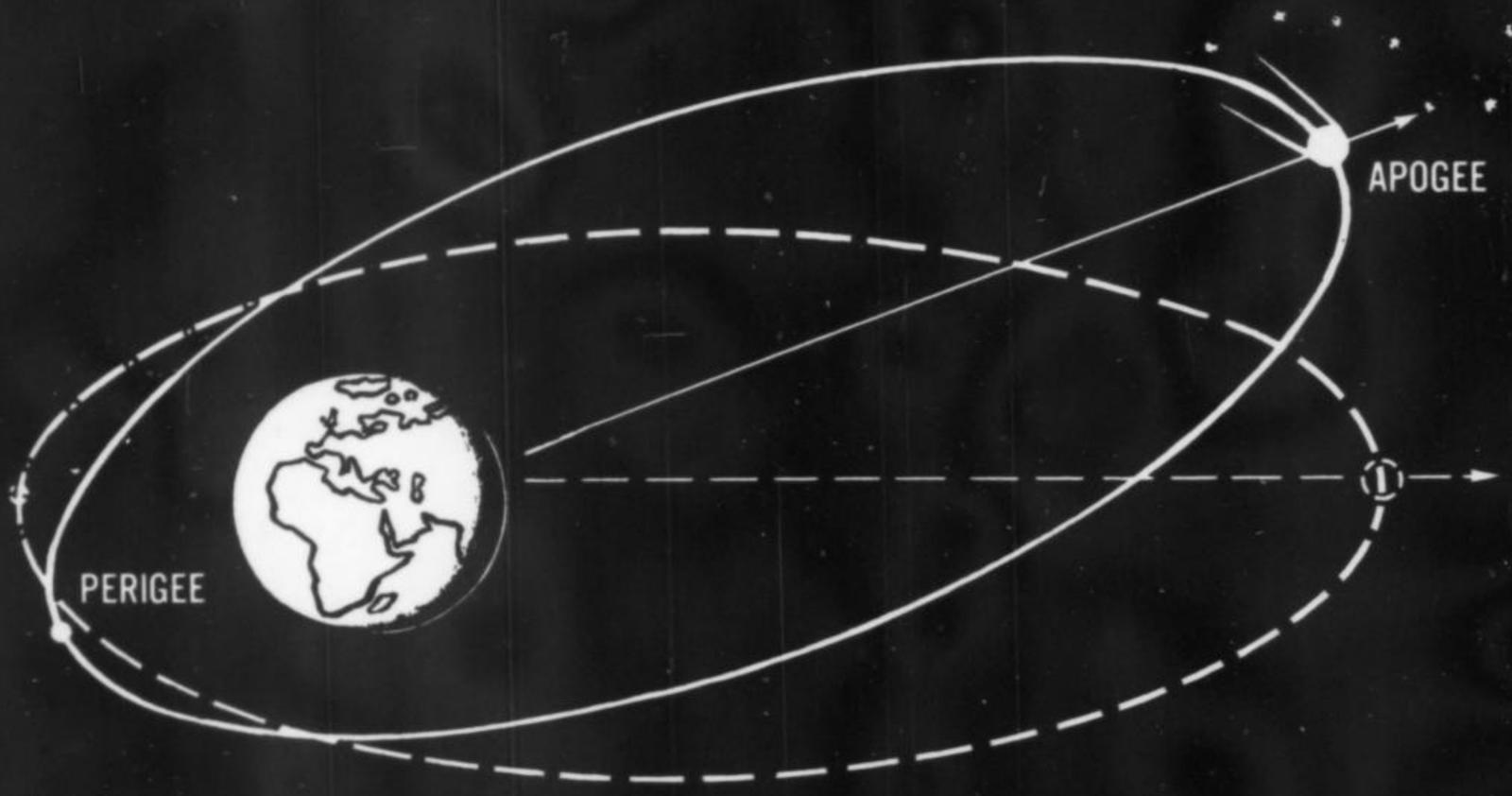
# TO A NE

UNHCR photos

# NEW LIFE

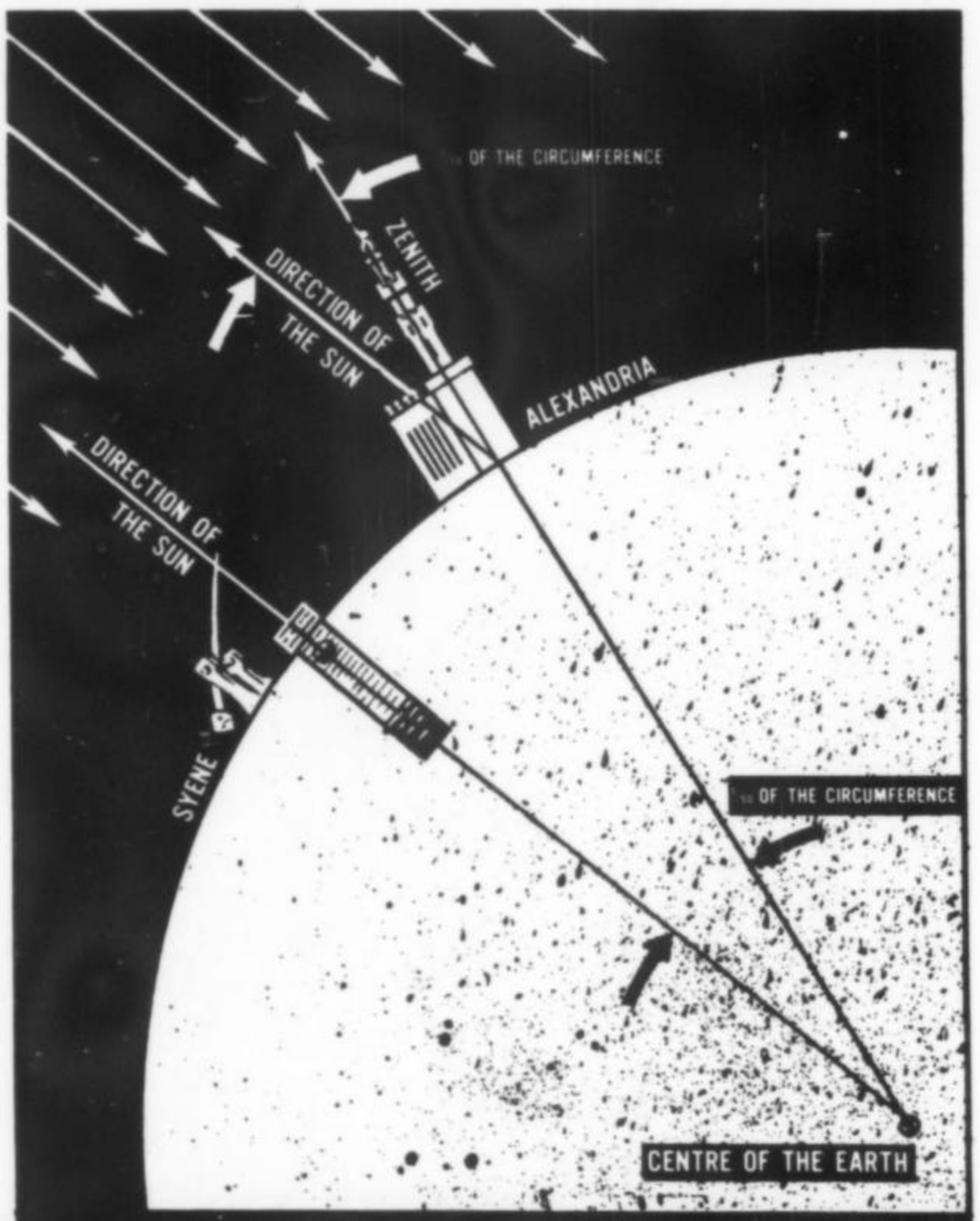


# A SPUTNIK'S EYE VIEW O




Unesco

"Man pierces the celestial vault and explores the spheres". Today, this prophetic 16th-century woodcut (right) by an unknown engraver has become fact. With the help of artificial satellites launched into orbit around the earth man has "taken the measure" of his planet. Other, more far-ranging "cosmic laboratories" have begun "the exploration of the spheres". Diagram on left shows (schematically) the changing path of a man-made satellite observed at the perigee (nearest point) and at the apogee (point farthest away from our planet).




Unesco

**ERATOSTHENES' WELLS.** Twenty-five centuries ago, Eratosthenes, poet, philosopher and astronomer, ingeniously calculated the earth's dimensions. As diagram shows, he observed that while the sun's rays shone vertically into a well at Syene in southern Egypt (at midsummer noon) their angle from the vertical at Alexandria corresponded to 1 50 of the circumference of a circle. His calculation of the distance between the two towns as 1 50th of the earth's circumference gave him a total distance of about 24,700 miles (best modern measurement is 24,860 miles).

WHEN asked what shape the Earth is we usually say without thinking that it is a sphere. But how many of us could give proof that this is really so? Probably only the spacemen who have flown round the Earth at a height of several hundred kilometres have a real visual perception of the sphericity of our planet.

The circular border of the Earth's shadow as it moves across the moon's disc during an eclipse, and the gradual rise of a moving ship as it approaches the observer, gave the ancient Greeks, with their keen, penetrating minds, the idea that the Earth on which they lived was like a ball. All those proofs of the roundness of the Earth that a teacher recounts nowadays to ten-year-old schoolchildren were recorded by Aristotle about 2,500 years ago.

Eratosthenes, curator of the famous Alexandrian library, poet, philosopher and astronomer, who lived about the same time as Aristotle, based his calculations on the dimensions of the Earth on the assumption that it is a spherical body. His method was simple but bore all the hallmarks of genius.

He had observed at Syene (Southern Egypt) that the sun at midsummer noon was directly overhead so that it shone on the water of the deepest well. When the sun was observed at the same moment from Alexandria, where Eratosthenes lived, its angle from the vertical corresponded to one-fiftieth of the circumference of a circle.

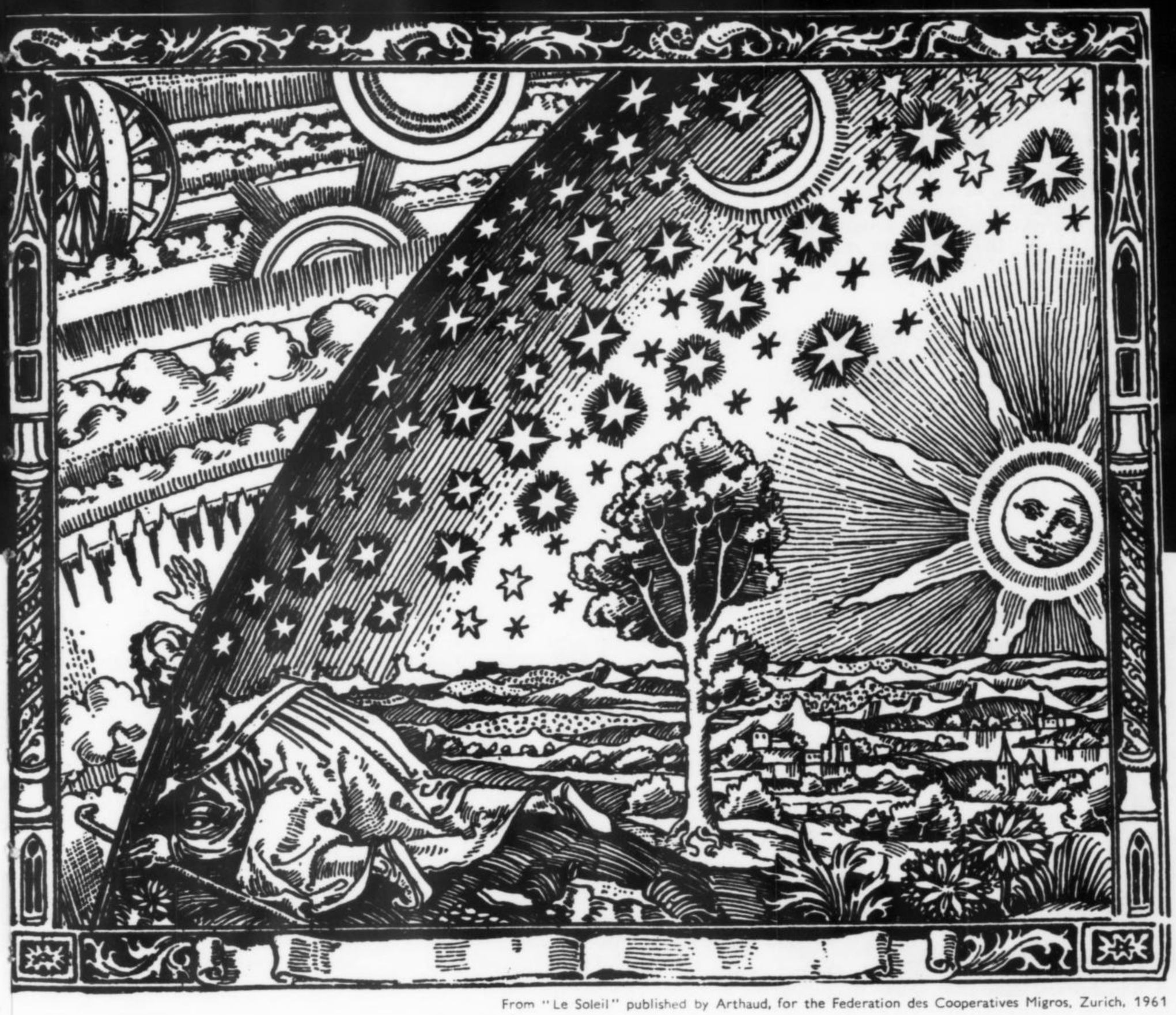
Lines drawn from Syene and Alexandria to the centre of the Earth would enclose the same angle; therefore, reasoned Eratosthenes, the distance from Syene to Alexandria must be one-fiftieth of the Earth's circumference. This gave him a figure of approximately 24,700 miles as the Earth's circumference (the best modern measurement is 24,860 miles)—and Eratosthenes lived twenty-five centuries ago!

Is the Earth a true sphere in shape? Before we can answer this question we must decide exactly what we mean by shape. There are plains, plateaux, deep hollows and high mountains on the Earth's surface. But it is the relatively uniform surface of the ocean, covering as it does three-quarters of our planet, that represents more exactly the real shape of the Earth. It is not very difficult to transfer this concept to dry land; in fact it is done when we speak of heights being so many feet above sea level.

Sir Isaac Newton, who lived over three hundred years ago, knew that the Earth could not be a true sphere.

# ...W OF THE EARTH

*by*
*L. Samsonenko*



From "Le Soleil" published by Arthaud, for the Federation des Cooperatives Migros, Zurich, 1961

This was the proof he offered: let us imagine two wells sunk from the surface of the Earth to its centre, one at a Pole and the other on the Equator. If the Earth did not rotate the water would be at the same level (reckoned from the centre of the Earth) in both wells.

Because the Earth does rotate, the water in the equatorial well would rise, under the influence of centrifugal force, until the pressure of the additional column of water compensated weight lost by centrifugal action.

The same thing must actually happen to the water in the seas and also to the body of the planet itself, since there are no absolutely rigid bodies in nature; this means that the Earth must be slightly flattened at the poles and bulge a little at the Equator, its shape resembling that of a tangerine or a pumpkin.

The measurements made by eighteenth century French scholars proved the accuracy of Newton's theory; working at the Equator and beyond the Arctic Circle they found that the meridian is 40,009 kilometres in length and the Equator 40,075 kilometres; the polar and equatorial radii differ by 21 kilometres. Newton computed the amount of flattening of the Earth (the ratio of the difference between the equatorial and the polar radii to the equatorial radius) to be 1/230. Huyghens, a Dutch scholar living at about the same time, made the same calculation and arrived at the figure of 1/530.

One may well imagine the consternation of the learned world when this big difference was made known. It was soon discovered, however, that the two scholars had based their calculations on different assumptions. Newton had assumed that the Earth's density is uniform throughout and does not change with depth, whereas Huyghens had assumed that the Earth's gravitational pull indicates that its mass is concentrated mainly in the centre, i.e., that density rapidly increases with depth.

Later measurements showed that the actual difference in the length of the radii is about 1 unit in 300 so that Newton was closer to the truth than Huyghens; the density of the Earth does increase with depth but not as greatly as Huyghens assumed. From this it follows that accurate measurements of the Earth's dimensions can help us understand something of what is inside it, thousands of kilometres below the surface.

It has now been demonstrated that the simplest and most accurate measurements of the shape of Earth may be made by observations of artificial earth satellites.

Man-made satellites circle the Earth in elliptical orbits, so that the distance from the Earth to the satellite is constantly changing. If the Earth were a true sphere the satellite would pass through the same points at its apogee and perigee in each orbit (relative of course to the fixed stars).

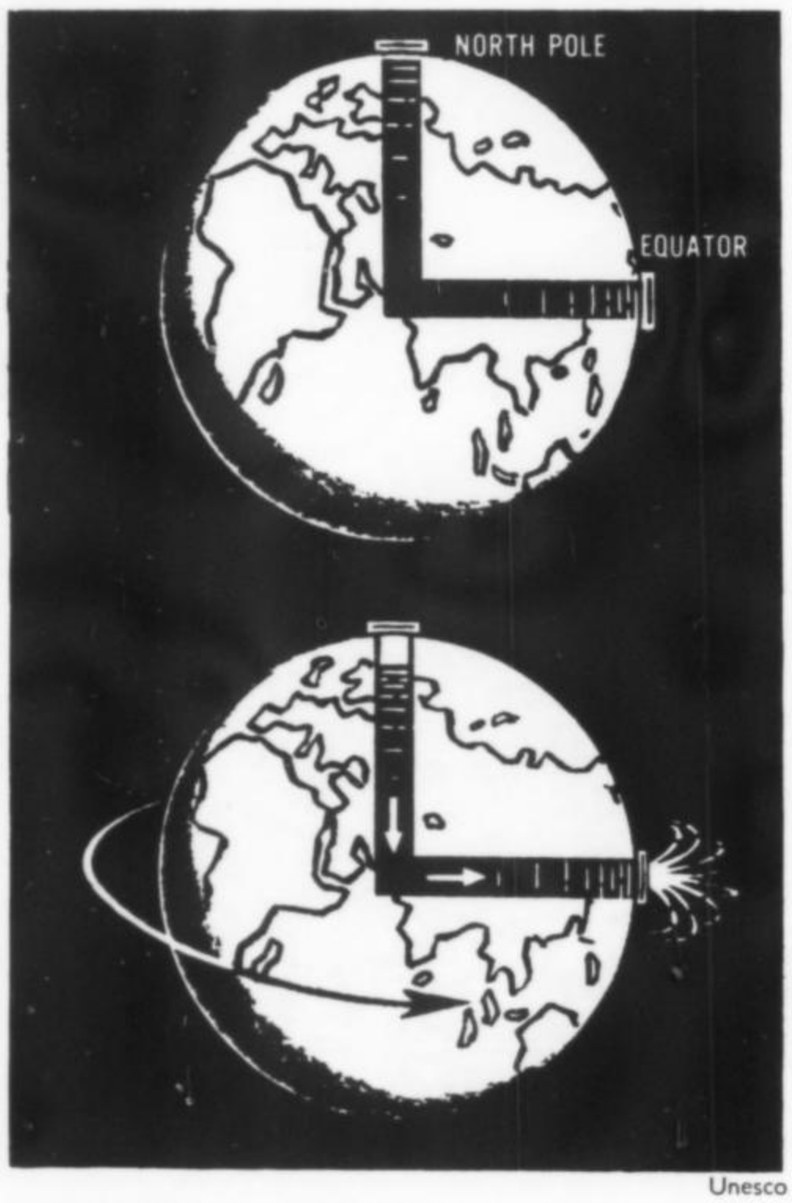


CONT'D ON NEXT PAGE

# Space-vehicles help to measure our planet

To put it another way, if, say, the perigee of the vehicle were visible from the Earth in line with a certain fixed star, the direction would be the same for each orbit. If, however, the Earth is an oblate spheroid and not a true sphere, this would not be strictly true.

Actually the perigee of a vehicle orbiting round the Earth changes with each orbit and gradually moves round the Earth; the amount of the shift for each orbit depends firstly on the flattening at the poles, the greater the flattening the greater the shift, and secondly on the angle between the plane of the vehicle's orbit and the plane of the terrestrial Equator (the smaller the angle the greater the shift). The movement of the vehicle's perigee (or apogee) around the Earth, therefore, enables mathematicians to determine the exact shape of the Earth.




Unesco

**ISAAC NEWTON'S WELLS.** In the 18th century, Sir Isaac Newton declared that the earth could not be a true sphere. To support his theory he imagined two wells sunk from the North Pole and the Equator to the centre of the Earth. If the Earth did not rotate, he said, the water would be the same level in both wells. But because of the earth's rotation, water in the equatorial well would rise under the influence of centrifugal force. The same must happen to the water in the seas and the body of the planet. Thus the Earth must be slightly flattened at the poles and bulge a little at the Equator.

When the vehicle is in flight the position of its perigee among the stars is noted; on each successive orbit the position is again noted and the difference in position, between successive orbits gives us the angle of displacement of the perigee. Knowing this displacement, the average distance of the vehicle from the Earth's centre, the time taken for one orbit and the declination of the orbital plane from the Earth's equatorial plane, an astronomer can calculate the oblateness of the Earth by the use of ready-made formulae.

In practice, of course, the position and dimensions of the orbit are much more difficult to calculate because they are affected by the resistance of the terrestrial atmosphere in a complicated manner that is not yet fully understood. The usual method is to strike an average for a large number of orbits.

It is important to observe the sputnik's perigee and the displacement of it from as many points on Earth as possible; this requires the co-operation of many countries and all continents.

In the twenties of this century the American scholar, John Hayford, spent some years analyzing geodesic data that had been accumulated over dozens of years and found the difference in the polar and equatorial radii to be 1 unit in 297. In 1940 a large group of Soviet geodesists headed by F. Krasovsky completed their many years of work on the same problem and arrived at the figure of 1 in 298.3. A few months' observation of Soviet Sputnik II and American Vanguard I produced the figure of 1 in 298.2, and the data was analyzed within a few weeks.

Observations of artificial earth satellites are made by over one hundred stations in the Soviet Union; positions of the vehicles in space are recorded by means of visual observation and by photographs taken with specially designed precision cameras. These observations have provided further information on the peculiarities of the Earth's shape.

We now know that the Earth is not a simple oblate spheroid. It is made like the figure known in geometry as a triaxial ellipsoid, that can be obtained by squeezing the sides of an oblate ellipsoid. The Earth's Equator is not a true circle, it is slightly flattened on two sides and has its greatest diameter approximately on the meridian of Prague. True enough, the difference is very slight—not more than 200 metres.

By careful observation of the displacement of the perigee of a "Sputnik's" orbit, scientists have discovered that the northern hemisphere is "higher" than the southern, the distance from the centre of the Earth to the North Pole being between 30 and 60 metres greater than from the centre to the South Pole.

This is only the beginning of the space age. Artificial satellites have been used for less than five years, but the observations have produced some outstanding discoveries.

The study of the Earth with the aid of small satellites has a tremendous future. If we know exactly how a "Sputnik" is moving and measure its position simultaneously from two points on the ground, we can measure the distance between those points accurately.

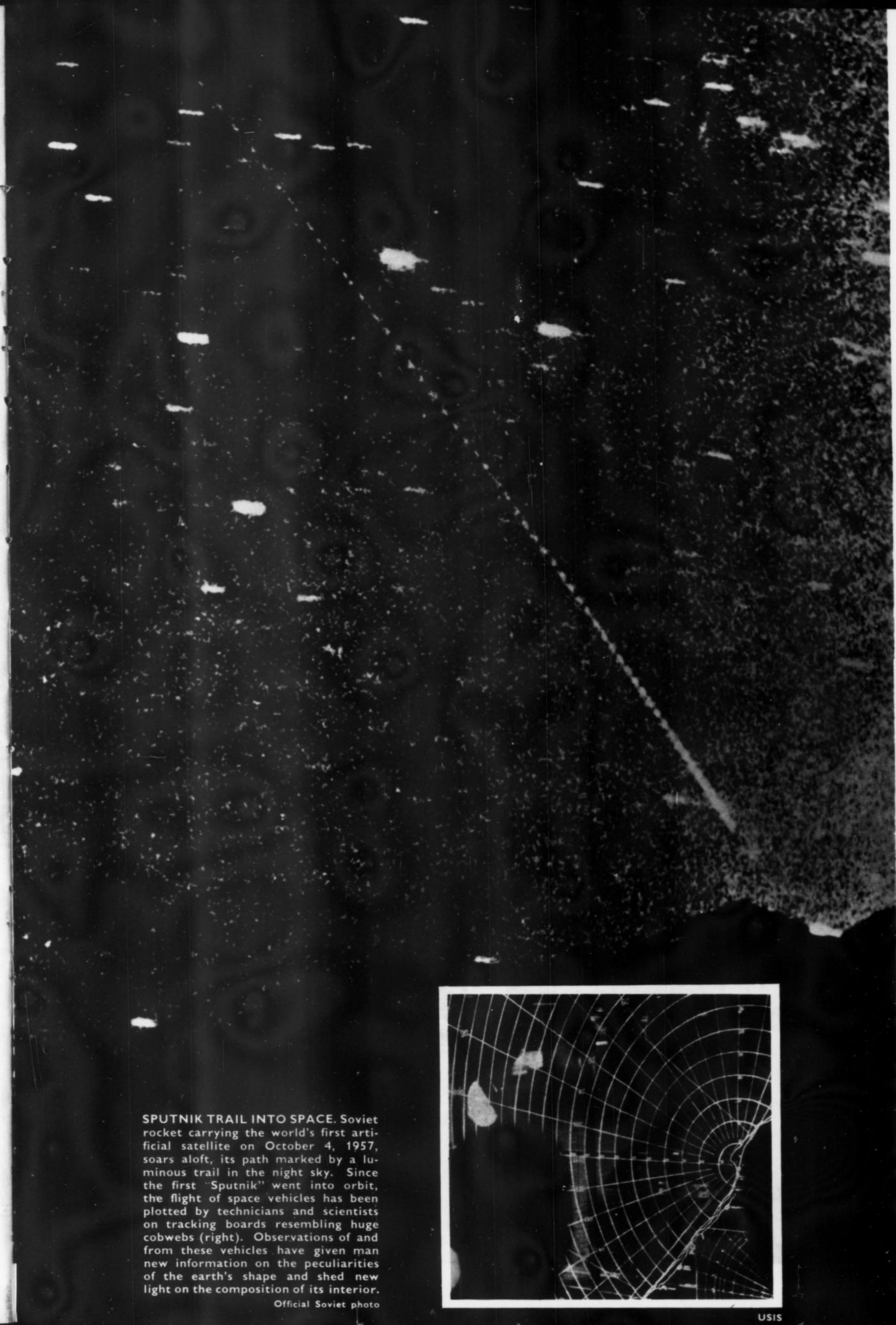
By locating observation posts in different continents and repeating the measurements over a number of years we can decide whether the continents are moving—are the positions of Eurasia, America, Africa and Australia fixed, relative to the Earth's centre, or do they drift about?

Changes in the character of an artificial satellite's orbit described above (the motion of the perigee) are caused by the greater concentration of mass in the vicinity of the Equator and the slight flattening; this excess of mass (in relation to the main mass of the Earth) helps to pull the satellite out of a "regular elliptical orbit".

It follows that the path of a satellite will change with every change in the Earth's gravitational pull so that the motion of a satellite over a mountainous area must be different from its motion over seas, because the mountains are composed of material that is denser than water and effect a greater pull on the satellite.

The satellite, furthermore, will "feel" big deposits of some extra heavy or extra light substances buried deep below the Earth's surface because of the difference in gravitational pull and will change its course accordingly.

Thus we see what great prospects for the study of the Earth's interior are opened up by the observation of even tiny man-made moons in flight.



**SPUTNIK TRAIL INTO SPACE.** Soviet rocket carrying the world's first artificial satellite on October 4, 1957, soars aloft, its path marked by a luminous trail in the night sky. Since the first "Sputnik" went into orbit, the flight of space vehicles has been plotted by technicians and scientists on tracking boards resembling huge cobwebs (right). Observations of and from these vehicles have given man new information on the peculiarities of the earth's shape and shed new light on the composition of its interior.

Official Soviet photo



USIS

All photos © Three Lions, New York

**GRAPEFRUIT-SIZED GLOBE** in centre of photo above is part of a dual plastic model of the earth and the heavens. A transparent globe of the earth is placed inside a larger sphere on which the sun, the planets and the stars are indicated. A globe of the earth similar to inner one shown here, has been used in U.S. space capsules.

**FLAT EARTH.** Like a flash-back to an old historical belief, the earth is flat on this plastic sheet (left) but it will be heated, then inflated with air to achieve the rounded contours of our planet (above). These large globes for schools are painstakingly made by hand.

# GLOBES FOR SPACEMEN... AND SCHOOLS

**As he hurtles round the earth in his space capsule, a U.S. astronaut has gauged his approximate position at a glance—by looking into a box. Inside the box is a grapefruit-sized plastic globe which the spaceman sees through a window marked with a black dot. The globe automatically turns on its axis like the earth. The position of the black dot indicates the position of the space vehicle in relation to the earth. This is one space-age use found for the plastic worlds created by an American from Philadelphia, Robert Farquhar. In addition to his space globes, Farquhar and a team of five men also produce plastic model worlds for schools and government agencies. These globes are larger than those built for space capsules. Farquhar also produces a novel type of transparent globe within a globe showing the earth and the stars (left).**

**NORTH MEETS SOUTH** as the globe-maker fits together the two sections of a three-foot globe.

## A new venture in art publishing

# UNESCO ART POCKET BOOKS

**A new international and multilingual publishing venture by Unesco has made its mark in the field of art book production. Collaborating with publishers in eight countries Unesco has launched a series of art books in pocket form. The striking fact about this new collection, in which four volumes have already appeared, is that it presents colour reproductions of great works of art of a high quality normally only found in expensive art books, in a pocket-sized format at well within the normal level of pocket book prices which are usually around 5/- or less than $1.00. This has been made possible by the scale of the enterprise and the co-operative arrangements between Unesco and publishers in Britain, the United States, France, the German Federal Republic, Italy, Mexico, the Netherlands and Spain.**

**EACH Unesco Art Pocket Book contains 28 plates of colour reproductions, additional illustrations in black and white and an introductory text by an international scholar in which the historical background and an analysis of the works it covers are presented in a simple, straightforward way for the man in the street.**

**In "Egyptian Wall Paintings from Tombs and Temples", Christiane Desroches-Noblecourt, Curator of the Department of Egyptian Antiquities at the Louvre in Paris, discusses the delicate frescoes painted some 3,000 years ago in the tombs and temples of the Nile Valley. "Persian Miniatures from Ancient Manuscripts" is introduced by Basil Gray and presents some of the great art treasures of the world in the form of miniatures now preserved in the Gulistan Palace of Teheran.**

**THE third book, "Spanish Frescoes of the Romanesque Period", introduced by Juan Ainaud, opens the door to a brilliant and little-known period of European art. Lastly, "Russian Icons from the 12th to the 15th Century", with its colour plates and an introduction by Victor Lazareff, presents a vivid overall picture of the different schools of Russian icon paintings.**

**More titles are to be added to the series which has so far appeared in English, Spanish, French, Italian, German and Dutch language editions. By this multilingual approach and the fact that these books will be on sale in every kind of bookshop and bookstall, in railway stations and large stores, Unesco's aim—to bring fine quality colour reproductions of world art masterpieces within reach of a wide public—will have been achieved.**

**The success of Unesco's earlier initiative in art publishing—its handsome World Art Series albums—promises to be repeated by its new Art Pocket Books. (See page 35 for further details.)**



**A Frenchman writes on**

# UNESCO
## IN RETROSPECT AND PERSPECTIVE

***by Jane Albert Hesse***

IT may seem surprising that UNESCO is still an unknown organization to certain people. Is it not an international organization which has been in existence for 16 years, the co-operative enterprise of 113 countries which has been reported and commented on by the world press? Its headquarters are in the centre of one of the world's great capitals in a strikingly-designed building of concrete and glass—a new sightseeing attraction for the visitor to Paris, but primarily the laboratory of a new 20th- century humanism.

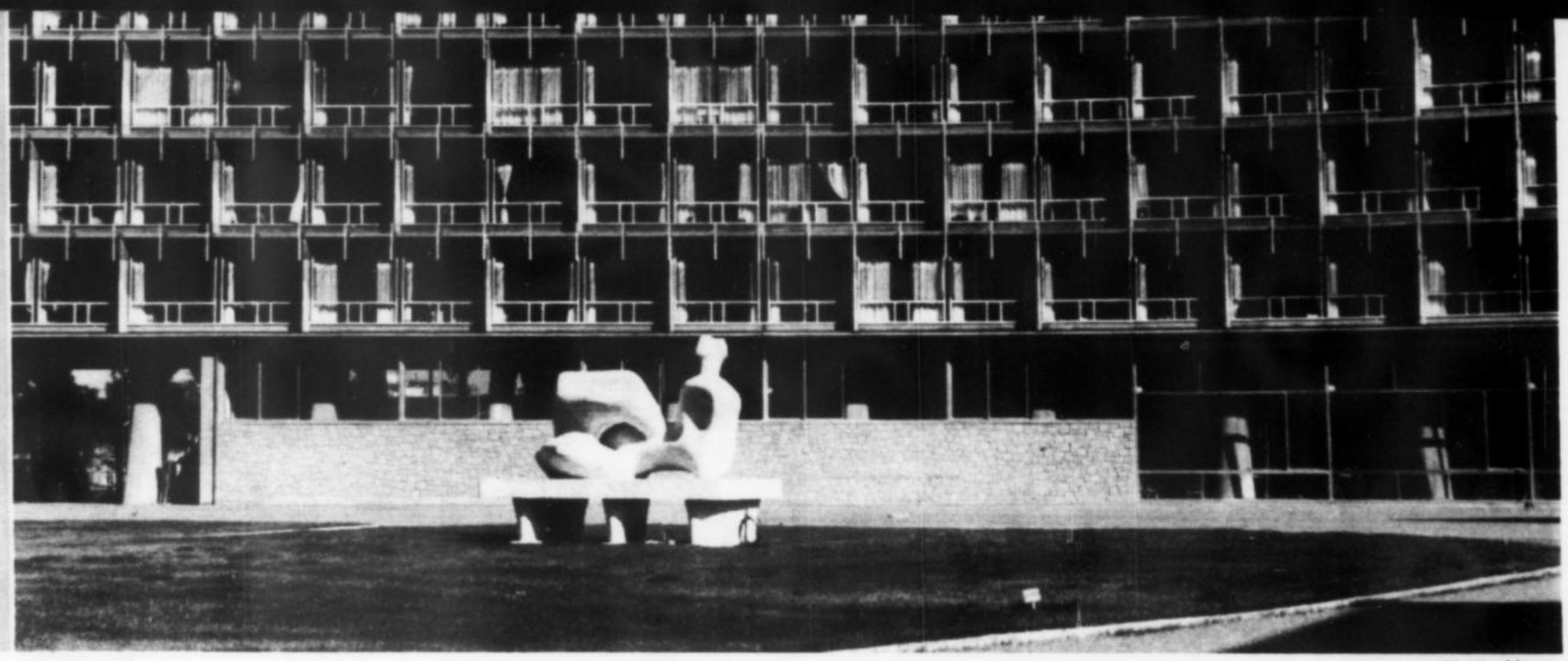
Educators, scientists, artists and specialists of all kinds follow UNESCO's work either by participating directly or through reading the books, periodicals and the studies which it publishes. But other people, the vast majority, in fact, only hear of UNESCO through the necessarily brief and fragmentary reports that appear in the press. Some, in fact, think of UNESCO either as an institute for study and research or a body with humanitarian aims on the lines of the International Red Cross.

Though comprehensive studies on UNESCO have appeared in some countries, in France, UNESCO's adopted home, no exhaustive work on how it came into being and what it has since achieved had ever been published until recently. This gap has now been filled.

A remarkable book published by the famous French publishing house, Gallimard, * recounts the UNESCO story telling of its aims and problems, its failures and successes. The book has set out to dissipate widespread ignorance and misunderstanding regarding UNESCO, yet even the reader well-aquainted with UNESCO will find revealing facts and information in its pages. Bearing the simple title, "UNESCO", the book was written by a Frenchman, Jean Thomas, who knows UNESCO well. He served UNESCO from 1947 to 1960, first as head of its Cultural Activities Department and later as Deputy Director-General. He shows how the name "UNESCO"—United Nations Educational, Scientific and Cultural Organization—embodies both the historical reasons for the creation of this U. N. Specialized Agency after the Second World War, and why, face to face with the urgent needs of a swiftly-changing world, it has had to choose between one road and another at various periods of its life.

UNESCO was born in London in November 1945, when representatives of 45 countries met to found a new organization dedicated to education, science and culture. The atmosphere of this period was influenced by the many still-unhealed wounds and the resolve of nations to "erase from men's minds the seeds of fanaticism and hatred." There was thus a need, as Miss Ellen Wilkinson, Britain's Minister of Education, said at the time, for an association of states which would make education one of its main fields of action, but not its sole objective.

UNESCO's forerunner, the International Institute of Intellectual Co-operation, established in 1926 by the League of Nations had been conceived on very different lines—as an "association of minds", to recall the words of Paul Valéry. In the case of UNESCO, the greatest emphasis was on education and the Agency was founded, to quote its own Constitution, "for the purpose of advancing, through the educational and scientific and cultural



Henry Moore

relations of the peoples of the world, the objectives of international peace and of the common welfare of mankind."

The rapidly changing situation of the postwar world and the emergence of so many former colonies and trust territories as independent nations soon made it clear which were priority tasks. Even before political developments sparked these changes, the economically-developed countries had stated clearly and unequivocally the degree of responsibility they felt towards their less fortunate neighbours.

How can UNESCO carry out its work, asked Sir Julian Huxley, in his first report as Director-General to the UNESCO General Conference, in a world where more than half the people are illiterate and lack the skills and knowledge necessary to build for themselves a healthy life and prosperous conditions of agriculture and also to make the most effective use of scientific discoveries?

The need was clear: give top priority to providing education where there had been none, never forget the humanistic ideal of universality and always show a genuine understanding and respect for cultural values whatever their origin.

At UNESCO's preparatory conference in London in 1946, representatives of 44 states were present. The next year, a total of 23 had ratified the Constitution and took their seats as member states at the General Conference. The numbers grew: 37 by the end of 1947, 55 in 1950, and today, 113.

Equality in status for the member states of UNESCO did not, however, remove a flagrant inequality of fact: the number of newly-developing countries in UNESCO grew unceasingly and the dividing line between these and the more favoured was clearly economic.

It was to meet this grave situation that the Expanded Programme of Technical Assistance was conceived, adopted in principle in 1948 and applied, in UNESCO's case, as from 1950. In applying this aid, UNESCO always kept in mind the aims affirmed in its Constitution. "UNESCO was the only international organization," writes Jean Thomas, "to take to heart the truth that people have not only material needs, but spiritual ones too, which are no less important."

This faith in the primacy of education and the resolve to see it universally acknowledged stand out clearly throughout the book. They are its real animating force and spirit. The author has not given to his account the chronological form that might have weighed down his narrative. Nevertheless the whole story of UNESCO—how it faced up to increasingly complex tasks, how it maintained course and purpose despite difficulties and crises and how, finally, it came to maturity—stands out clearly in his account.

No one could say that UNESCO's task has been simple. It has encountered many difficult and dangerous situations in its lifetime and one of its major problems has been the question of its moral autonomy. "How can the unanimity which for so long has been missing from the United Nations be achieved in UNESCO?" asks Jean Thomas. Yet while in no way underestimating the difficulties, he considers that UNESCO is proving its worth, and explains why. However, to judge its effectiveness, he adds, "each one of UNESCO's projects must be examined separately and each time on the basis of different criteria."

How then has UNESCO coped with two major tasks: the fight against illiteracy and the reclamation of the world's arid lands?

It is not UNESCO's role to take over education for children or for adults in any country. This is the responsibility of governments. Through a system of co-operation between governments, educators and appropriate organizations, UNESCO has offered advice on educational techniques that might be used, has suggested the lines for development programmes and has passed on the results of experiments that have been tried successfully elsewhere. It has given direct aid to countries when they have asked for it.

For the arid zone problems, "through co-operation between specialists, UNESCO has encouraged and co-ordinated scientific activities related to these problems and has helped member states within the action of the Technical Assistance Programme."

Thus any evaluation of UNESCO's effectiveness must take into account UNESCO's aims, the methods it uses and the means it is given to work with. None of this is likely to be immediately obvious to the man in the street. It is here that the Jean Thomas' book reveals itself as an indispensable guide to those concerned with public information. It analyzes clearly and precisely UNESCO's relations with its member states and with the United Nations and explains how UNESCO co-ordinates the delicate balance between its activities.

No matter how slight his previous knowledge of UNESCO, the reader is left with the impression of having shared in an unfolding adventure of high endeavour. For, says the author, UNESCO's Constitution has given it a task high in the scale of moral values: "the maintenance of peace and security among the nations". But the roads of peace are rarely triumphal highways, modest, rather, and always difficult of access.

Here, in its "public relations", its relations with the peoples of 113 countries UNESCO is accomplishing its mission. Thousands of peace treaties have been swept away by the winds of history. UNESCO today strives to build the defences of peace in the minds of men.

And this is by no means the least important of the lessons offered by this book which the author concludes on a resolutely optimistic note, still further underlined by the frankness with which he has described the temporary setbacks and permanent problems facing UNESCO. "When one takes stock," he says, "of all the multitude of different activities and intellectual disciplines involved in UNESCO's work, the resulting array of strength is so great as to banish any fears as to the resources open to it. What it must learn to do is to draw and marshal around it all these forces of goodwill."

---

* UNESCO *by Jean Thomas, published by Gallimard, Paris,* 1962. *Price* 13.50 *Fr. frs.*

# THE HIDDEN FACE OF THE CINEMA

by Paul Léglise

## PT. 2 FILM DISTRIBUTION

In its December issue, THE UNESCO COURIER began the publication of a series of articles on the lesser-known aspects of the cinema industry based on a world-wide survey by Paul Léglise. In his second article, the author turns a spotlight on the vast and complex machine through which films of all kinds are distributed to the world's 170,000 commercial cinemas as well as to the multitude of specialized non-commercial cinemas.

A film has been completed. Soon it will be presented to the public in cinemas around the world. Its makers hope that it will turn out to be a major box-office success, drawing record audiences to the cinema. As the American producer, Walter Wanger, once wrote in *The New York Times:* "The film must appeal just as much to an eight-year-old child as to a man of eighty; it must entertain people of every race and every country, irrespective of their religions, and political or social systems."

This is the salient principle of the universal audience and what American film-makers mean when they speak of "universal appeal." But the cinema-going public is not a homogeneous group of people. Innumerable influences exert pressure upon the cinema audience. Sex, age, income, social position, level of education, character, likes and dislikes, working hours, seasons, periods of prosperity and economic crisis—all help to mould the audience, as does publicity in all its forms. And, moving alongside the entertainment film, the specialized production now holds an increasingly important place in the cinema world.

By way of example let us simply take one of these factors—age. Surveys and polls conducted in different countries all indicate that, from childhood on, film-going increases with age to reach its maximum among teen-agers (between 15 and 20). From then on attendance declines. Thus the film public and the public in general are not one and the same and because of this, film distribution has to be geared to meet the special characteristics of the film-goers. Its first problem is publicity: what is the most effective way to publicize a newly-completed film?

The greatest impact on the man-in-the-street is made by the "spectacular" aspect of publicity—the use of huge poster hoardings and eye-catching boxed items in the press. Through other columns in newspapers and periodicals he also tastes some of the atmosphere and feverish excitement of international film festivals—the gala openings, carnival-like processions and cocktail parties.

All this is dismissed by some people as trivial and frivolous. And yet this kind of artificial effervescence is vital to the cinema. This was so in the past and is still the case today. As to the future, there is a need for the development of more mature tastes in the spectator—and the means to satisfy them. Tomorrow's film-goer will be more responsive to the qualities of what he or she sees on the screen, and the cult of the film will be replaced by a love of the cinema. Already film criticism is making a positive contribution in this direction.

**FANS AND FLASHLIGHTS.** Flashbulbs pop while fans and the curious crowd around some of the stars in the galaxy attending the Cannes Film Festival in France. Behind the glitter and excitement of such occasions—the gala openings carnival-like processions, receptions and cocktail parties—is another world : the serious, down-to-earth business world of the film industry.

But the general public has, on the whole, little inkling of the things that go on behind this glittering facade: the negotiation of contracts, the planning of future productions and the sale of current films on the world market. The number of contracts signed during a fortnight-long festival is a fair measure of the concentration of "stars" and big names in the cinema at any of these "fairs" of the film world.

While business may occupy pride of place at the great film festivals, cultural values are not forgotten. Meetings, discussions and round-tables are not exclusively concerned with professional matters, but deal with such subjects as artistic expression, intellectual trends, the art of editing or décor.

Festivals at Cannes, Venice, Berlin, Moscow, Tokyo. Mar del Plata, St. Sebastian and Locarno are primarily devoted to feature-length entertainment films. There is never any question of other aspects of the cinema being given the place of honour nor can they always even squeeze their way in to a folding seat or a stool in the aisle. This explains the mushroom growth of film festivals that we have seen recently in many parts of the world.

Some (Oberhausen, Tours) are solely devoted to short films or, more generally to cultural and documentary films (Cork, Mannheim, Manila). But above all nowadays the movement is towards subject specialization (mountains and exploration at Trento; sports films at Cortina d'Ampezzo; industrial films at Harrogate, Rouen and Antwerp; cartoons at Annecy; music and dance films at Valencia; touristic and folklore films at Brussels).

An important co-ordination problem concerning film distribution is how to keep the organizers of film screenings properly informed about the material that is currently in circulation. The difficulty is not so great in

© Europress, Paris

the case of feature-length and even short entertainment films shown in cinemas thanks to the excellent comprehensive catalogues distributed each year by the national trade organizations. But for cultural, educational, scientific, technical or industrial films the situation is far more complicated. How is one to find the way through a forest of catalogues that overlap, but do not necessarily present a complete picture, and amid card indexes of the most varied types and sizes.

One way of getting around this problem was suggested by a round-table gathering organized by UNESCO in Venice in July 1959. This meeting recommended that national information centres should be set up to supply facts about all films produced in their respective countries. A similar suggestion came from the conference organized in London in February 1961 by the Council of Europe, on the distribution of cultural films.

Subsequently, at UNESCO's request, the International Cinema and Television Council appointed a specialist to make a thorough study of the problem. In a remarkable and comprehensive report, this specialist has outlined all the facts on the basis of which a rational and effective plan of action could be co-ordinated and applied.

As recommended by the Venice round-table and the London conference, the national cataloguing centres would assemble and list all films and television programmes for eventual publication in a General Film Catalogue, similar to existing national bibliographies. To meet the delicate problem of bringing cataloguing standards into line, UNESCO has published, *International Rules for the Cataloguing of Educational, Scientific and Cultural Films and Filmstrips*.

In the early days of the cinema a film might be produced in hundreds of copies which were sold by the yard and shown by travelling showmen until completely worn out.

The film trade was first alerted to the need for a reform in this sphere by a former French lawyar, Edmond Benoit-Levy, in a key article that appeared in the review *Ciné-Gazette* which he founded in 1905. Writing under the pen-name of Francis Mair, he asked, "What is a film? Is it ordinary merchandise which the purchaser can use as he thinks fit? No, a film is *a literary and artistic property*. In order to show it royalties must be paid. Future discussions will be concerned with the fixing of such royalties."

The first to adopt this formula was the French newsreel pioneer, Charles Pathé, who in 1907 set up five regional companies in France and gave them a 20-year monopoly to exploit his productions.

The results of this reform in distribution methods were revealed quite clearly when the second international congress met in Paris under the presidency of Georges Méliès in February 1909. This was attended by film company representatives from the United States, Great Britain, Denmark, Italy and France. Faced by a looming crisis in the cinema business and wishing to fix uniform prices for films as well as to prevent the over-long use of prints, the congress decided to introduce the first regulations governing the sale or release of films. Producers agreed that in future they would supply films only to those who had signed an agreement and who were prepared to certify in writing that they would return the films, carriage paid, to the producers within four months.

This was the beginning, however embryonic, of film distribution as we know it nowadays. Today a product of the film-maker's art is protected as an original work under the Berne and Geneva Conventions on Copyright, and only its authors have the right to authorize its reproduction and screening.



CONT'D ON NEXT PAGE

# A trade in 'intangible property'

Who are, in fact, the authors of a film? For many years this controversial question provoked lively discussions at international congresses. The 39th Congress of the World Literary and Artistic Association, held in Budapest in 1930, appeared to reconcile the conflicting views on the problem when it defined the term "author" as covering the writer of the original work, the composer of the original score and the film's director, with the producer retaining exclusive ownership of the cinematographic rights in the work for a period of seven years.

For some years afterwards, however, producers, pressed home the view that the producer was the chief, if not the sole, author and that he alone had the right to authorize the reproduction and showing of a film.

NOWADAYS the film is generally considered as a collective work and while each film may be judged as an individual case, the prevailing view is that the co-authors of a cinematographic work are the creative collaborators (director, scenario writer, music composer and producer).

These co-authors grant most of the rights which they have inherited in the work to one of their number, the producer, but retain a moral right which covers the inclusion of their names in the film credits and in advertising and enables them to refuse to accept any changes that, in their view, detract from the integrity of their work. For the distribution of the work, the producer may in turn grant the rights which are his by contract to other persons. Thus the distribution machinery is set in motion.

It seems reasonable to suppose that not only the financing arrangements of a film, but even more so its distribution would call for a full knowledge and clear understanding of its authors' rights, any contracts involved as well as any disagreements and ensuing legal decisions. It is surprising, therefore, that only a few countries such as France, Italy and Federal Germany, require these basic facts to be listed in a central registry.

Though film distribution may be looked upon in principle as a trade in what jurists call "intangible property" (having no material existence in itself, but attaching as a right or profit to some actual thing) it does involve many aspects of a more material nature.

After signing a contract with the producer—and as we have already seen, this often takes place when the question arises of financing a planned film—the distributor, acting for the producer, launches a publicity campaign aimed at exhibitors. Screenings for members of the film trade are arranged and distribution company salesmen make the rounds of cinema managers' offices to offer films that are available.

Blind-booking—doing business in films that are still in the planning stage—is practised less often nowadays. Yet the risks involved in rentals of this kind are still accepted by some first-run cinemas which thereby put up a percentage of the money needed to finance the production. Large companies whose interests cover simultaneously production, distribution and exhibiting are also obliged to adopt this system in their cinema circuits so as to ensure the distribution of their own films. And for similar reasons, so are the cinema organizations in countries with socialist economies.

Another method—frequent and deep-rooted—is block-booking which consists of not selling the exhibiting rights to a given film but to a series. Exhibitors buy a locomotive (a film sure of box-office success) and a string of trucks (films whose profitability is far less certain) on the basis of "all or nothing at all." This is the reason for the uneven and incongruous series of programmes that some cinemas —other than those which specialize in a certain type or

CONT'D ON PAGE 32

Magic by Merlin is an eye-opener (above) for this 12-year-old "star" of the film, "School Saucery" an awardwinning production by the Walton County Secondary School Film Unit in England. Each year the best school film unit productions compete in a nationwide contest sponsored by Great Britain's National Union of Teachers.

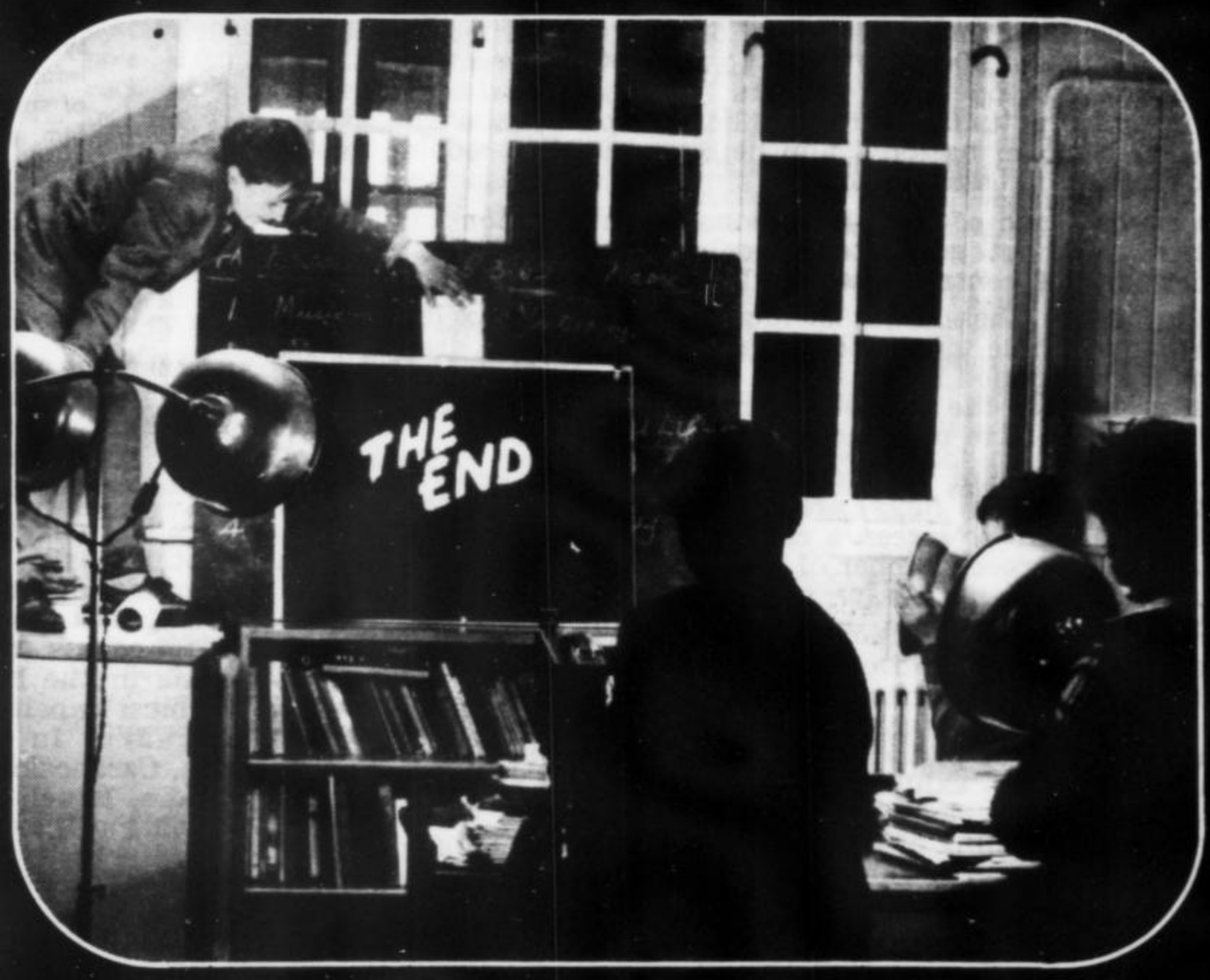
Litter bin is pressed into service by a youthful cameraman (right) "on location" at a seaside resort. Film production gives youngsters a deeper and more serious interest in the cinema and develops initiative. Below, a 15-year-old artist at work at the animating desk on a cartoon sequence.

All photos Walton County Secondary School Film Unit

The right angle for the close-up. Schoolboy cameraman prepares to "shoot" the girl "star" of the film, "Crosswise" (right). Below, a camera team photographs the end titles for "School Saucery", a short film.

# FILM FESTIVAL FOR THE JUNIOR SET

This year for the first time school-age and teen-age film producers are to have their own international festival. The "Tenth Muse Competition" organized by the International Centre of Films for Children (241, rue Royale, Brussels) is to be held at the Venice Lido and will award prizes for the best films made by young people. It will be world-wide in scope and open to two age groups: those under 16 and those between 16 and 18 years of age. Films may be in colour or black and white, 8-mm. or 16-mm., but they must be silent and must not run longer than 15 minutes. The "Tenth Muse Competition" (adding a new one to the nine muses in classical mythology) reflects the place now given to films in the classroom and in education generally. Film production by the pupils themselves is now a regular feature in the curriculum of many British schools. Photos on these pages show some of these junior British film-makers at work.



# Boom in art and experimental films

class of film—offer their customers; programmes that always surprise cinema-goers who would like to see something corresponding to their tastes rather than simply "go to the cinema."

How many prints of a film will be needed by the distributor? The answer can vary—considerably. It all depends on the success of the film, the cinemas involved and whether the film is to have a mass release or a gradual distribution. Copies reduced to a 16-mm. format instead of the standard trade format of 35-mm. will be needed for use on rural circuits and in the non-commercial field.

In the case of foreign language films, sub-titles must be added or, through the more complex operation of post-synchronization, actors voices dubbed in the national or local language.

Then the next phase in distribution begins. Films have to be despatched and on their return the condition of copies checked carefully. This alone calls for an adequately-developed technical department, according to the size of the firm and the number of rental contracts.

Equally indispensable is an extensive book-keeping department. The distributor, in fact, is the real cashier of the cinema and as such he often becomes a kind of production banker. He draws up the invoices, sees that these are settled and pays over to the producers the sums that are due to them. Supervision of receipts, especially where a system of percentage rentals is involved, is often a far from straightforward operation.

It is here that corporative or State bodies can often be of great help since taxation and financial authorities have a direct interest in the control of cinema business. In France, for instance, all tickets sold at cinema box-offices are supplied by the National Cinematographic Centre. After each programme is screened, the Centre receives a declaration of receipts, showing the first and last numbers of tickets sold during the performances.

In the socialist countries distribution and production are associated in nationalized firms which come directly under the ministries concerned with films: *Film Polski* (Government Film Monopoly in Poland), *Ceskoslovensky Film* (Czechoslovak Films), *Sovrofilm* (Rumania) and so on.

DISTRIBUTION problems like those already described create new difficulties in developing countries where the technical resources to cope with them are not always available. Shortage of raw film and a polyglot language situation complicate matters still further.

These are the kind of problems that inspired the Bangkok Conference on the development of information media in South East Asia (January 1960) to suggest the creation of a regional co-operation bureau. Though this body would not itself actually distribute films, it would assist co-ordination between national film departments and would produce local-language versions of films.

Under what kind of legal conditions is film distribution operated? Without going too deeply into the judicial complications of contracts we find two main categories.

In the first of these the distributor obtains the exclusive right to handle a specific film within a specified area and for a fixed period at an agreed price or, alternatively, against a share of the receipts from rental. He may also grant these rights to another distributor.

The second type of contract determines the general conditions in which films are exhibited. It gives the exhibitor the right to screen a copy of a film in a specific cinema for an agreed number of sessions, on pre-arranged dates and on payment of a lump sum or a fixed percentage of receipts. He may not, however, pass on this right.

This type of contract usually includes clauses granting benefits to certain cinemas: sole rights (only the beneficiary has the right to show the film within a specified region and for a set period); priority (the right to screen a film before other exhibitors); first or second showing rights; protection periods (the length of time prior to or following the screening of a film during which no competing exhibitors within a named area may also exhibit it).

Programme patterns vary from one country to another. By far the most common practice is to open with a newsreel and one or more short films and then present the main feature film. But this seems to be increasingly replaced by the "double feature"—two major films in the same programme. This trend is to be regretted for it leads to the suppression of short films and a corresponding growth of the so-called "B films."

There are of course, other kinds of cinema programmes. In the "news theatre," for example, newsreels and short films provide about an hour's entertainment, and some other cinemas provide a complete programme of shorts.

Today art and experimental cinemas grouped within the International Federation of Art and Experimental Cinemas

United Nations

A vast number of educational films are produced nowadays, but their distribution is handicapped by lack of standardization in cataloguing and indexing systems. Unesco has now made a study of the various systems with a view to co-ordinating and assembling information about educational films which would be of special benefit to countries in which this kind of film production is small or non-existent. Above, an image of rural life in Ceylon being filmed by a cameraman from a U.N. travelling motion picture unit for a film entitled "A Field in Asia", showing developments in U.N.-aided projects throughout Asia.

are experiencing a remarkable boom throughout the world by distributing top-quality programmes of the kind that are often hard to exploit commercially. The development of special programmes for young people should also be taken into account.

Generally speaking, cinemas receive newsreels on a subscription basis. Payment is calculated on fixed sum or a percentage, depending on how up-to-date the newsreel is by the time it is shown. In South America, for example, the rental cost is frequently a multiple of the price of the best seats in the house (five times the cost of a ticket for the most expensive seat in Brazil; ten times the price in Paraguay). In some countries, including Argentina, Bulgaria, Czechoslovakia, German Federal Republic, Hungary, India, Israel, Italy, Japan, Peru, Poland and Spain, the showing of newsreels is compulsory.

(To be continued.)

# Letters to the Editor

## ROADS TO FAMINE

Sir,

I read Mr. Zottola's article "Famine, the Greatest Scourge of History" (July-August 1962) with much interest. It also made me wonder why historians have so seldom stated the combination of factors which leads to famine. If these were better known perhaps many famines could have been avoided or the damage caused considerably reduced. The Bengal Famine of 1942 was triggered by fear, followed by hoarding of food grains in damp and unhygienic stores where it was destroyed by fungi and store pests. If there had been air-tight bins and modern silos in India on a sufficient scale there would have been no famine. How many of the European famines have been brought about by mould fungi and micro-organisms?

You mentioned that Sir Jack Drummond said, "We had no idea how to revive these dying victims of hunger." Between May and November 1942 I had the task of going into Burma to help our refugees. I fed the first meal to more than 22,000 starving, exhausted and often disease-ridden refugees. During the first few days I killed off 9 people with rum or brandy and another 9 with too much food. This meant in terms of figures that I lost 18 refugees out of about five thousand. During the next four and a half months when conditions were much worse, I lost one woman out of seventeen thousand people.

Twenty years later, reading the numerous books about over-population, agriculture and hunger, I am wondering if everyone has forgotten the advice that Joseph gave to Pharaoh about building storehouses and silos. Air-tight bins and silos do not seem to be mentioned in the reports of the United Nations. Why?

**A.R. Tainsh**
**Stockholm, Sweden**

## HOW BIG IS BUENOS AIRES?

Sir,

In your July-August issue under the heading "Big Cities Getting Still Bigger" you published a handsome photograph of the port and city of Buenos Aires. Under it you say that Buenos Aires and its suburbs "have 6 1/2 million inhabitants—almost the total population of the country in 1914." This information is wrong unless you consider that the suburbs of Buenos Aires spread over a distance of 300 miles and more from the city itself.

According to a study made by Alberto Cataldi, of the Latin-American Demographic Centre in Santiago, the population of the Argentine capital, comprising greater Buenos Aires and its immediate suburbs, was 3,795,813 on September 30, 1960, the date of the last census. The rest of the province of Buenos Aires, including such important cities as La Plata, Mar del Plata and Bahia Blanca, had by then 2,938,735 inhabitants.

Consequently, the population of 6,734,548 (sum of the figures quoted above) corresponds to the province of Buenos Aires, including the federal capital.

**Alejandro Echegoyen**
**Santiago, Chile**

## WORLD'S WORST EVIL...

Sir,

I was very moved by the articles you published on the world fight against hunger (July-August). With the mechanized methods that exist in the world hunger should have long ago been banished. Unhappily this redoubtable curse will always be with us as long as there is no just and equitable sharing out of all kinds of consumer goods. In France alone scores of thousands of under-nourished people try to exist on salaries or pensions that shame a self-proclaimed progressive country. In my view the worst evil in the world is money and as long as it remains paramount, the ravages of hunger will continue. The so-called advanced countries speak of helping underdeveloped ones. They should first put their own houses in order, above all morally.

**André Tosolini**
**Clermont-Ferrand, France**

## ... AND MOST SERIOUS MALADY

Sir,

Although I have read many issues of your journal the most serious disease of modern times has not been tackled. Mistrust between the nations of the world can do more harm than any other disease known to the peoples of the world. THE UNESCO COURIER is read throughout the nations of the world, thus what bigger audience can there be?

I appreciate that yours is not a political paper, but would it not be possible to utilize a whole issue on each of the countries in UNESCO... on the ways of life of the people, food and agriculture problems, medical services, working conditions, plans for the future etc. etc. If only the ordinary man in the street could be made to understand that the ordinary man in the other countries wants the same things from life as he does, then perhaps there may be a chance of peace in this world.

**H. H. King**
**London, England**

## YOUTH ON THE MOVE

Sir,

I am particularly interested in travel, living with people of other nations which I think is so important. We recently travelled to Turkey, through Yugoslavia, Greece and Crete by any means of transport available—ox-carts, donkeys, on foot, in passing vehicles—and relying on the hospitality of the people for food, etc. Everyone was so helpful and kind the whole journey has left a deep impression on us. The poverty and yet the simplicity in which these people took it for granted to share with us the little they had overwhelmed us. Since then I have taken to the road many times, travelling in the same way, meeting people and exchanging ideas. This has brought about a tremendous desire to travel even further in the Middle and Far East but this time I would like to work with some kind of organization —I do not care how small my part may be in it. I wonder how it is possible to go about finding such a job and wonder if you can help me.

**Barbara Bastian**
**London, England**

EDITOR'S NOTE: *Young persons of either sex interested in working abroad can contact the Co-ordination Commitee for International Voluntary Work Camps, 6, rue Franklin, Paris 16e, France. An article on the Voluntary Work Camps will be published shortly.*

## BRAVE NEW UNIFORM WORLD

Sir,

Your aim, as far as I can see, is to make us, as civilized literate people, aware of the plight of people (underdeveloped people seems to be implied) in underdeveloped countries and to help them materially and intellectually to attain a high standard of living similar to our own. Also there is the luxurious preservation of wilde and rare beasties and the contemplative observation of all manner of crawling things and coloured stones which I do admit could contribute quite a lot, in its own sophisticated way, to the furtherance of scientific knowledge; but in what direction?

The most basic, real, attainable aims of the organization are the culturable and educatable peoples of the world. The eventual success of all these high endeavours will be a brave new uniform world, devoid of form and so devoid of culture, religion and superstition and everything that man as a proper cultured unit feels in his soul.

The progress of communication in the present century has been a curse to every existing culture in the world.

To sponsor a thought-flux between civilizations is a prolific sophistication begetting only sophistications, all of which are barren. Certainly, one day the world will be uniform but do not let the dominant culture select those parts of the subsidiary cultures that it fancies. Let there be mature conflict, let there be evolution and no willing synthesis...

**Michael Ferron**
**Londonderry, Northern Ireland**

# From the Unesco Newsroom...

## RENÉ MAHEU ELECTED DIRECTOR-GENERAL OF UNESCO

**M. RENE MAHEU of France has been elected Director-General of UNESCO by the 12th Session of the UNESCO General Conference meeting in Paris. With 89 out of 99 delegations voting for his nomination, Mr. Maheu was elected on November 14 with a larger majority than any previous UNESCO Director-General. Previously he had been Acting Director-General since the resignation of Mr. Vittorino Veronese in 1961. Born in France in 1905, Mr. Maheu graduated from the Ecole Normale Supérieure and taught philosophy at the University of Cologne, the French Institute of London and the Franco-Moslem College at Fez, between 1931 and 1942. He joined UNESCO in September 1946 as head of the Division of Free Flow Information. In 1949 Dr. Jaime Torres Bodet, then Director-General of UNESCO, appointed him as Director of his Office. He was appointed Assistant Director-General by Dr. Luther Evans in July 1954, and, with the same rank, UNESCO Representative to the United Nations in New York in November 1955. Mr. Maheu returned to UNESCO headquarters in December 1958 and in November 1959 was appointed Deputy Director-General by Dr. Vittorino Veronese. Announcing Mr. Maheu's election for a term of office of six years, the President of the General Conference, Professor Paulo de Berredo Carneiro of Brazil praised the choice of Mr. Maheu who, he said, was "a direct product of the UNESCO Secretariat and, therefore, an international man."**

Unesco - Dominique Roger

**EARTHQUAKE-PROOF HOMES:** A UNESCO specialist sent to Iran following the disastrous earthquake on September 1, 1962, in which 12,000 people lost their lives, has suggested how mud-walled village homes there could be simply and inexpensively reinforced against future seismic shocks. He proposes the use of steel straps which in two hours can be fitted by four men on poles at each corner of the house and tightened by turnbuckles.

**MONACO'S 'SCOLATEX' CONTEST:** Following the success of its inter-school and international educational philatelic exhibition, "Scolatex I", in 1959, the Monaco National Commission for UNESCO is this year organizing a philatelic contest-exhibition, "Scolatex II", which will be open to all young people under the age of 18. Individual or group competitors will be asked to illustrate, by means of stamps, a theme or idea of their choice. For full information write to the Commissaire Général de Scolatex II, Commission Nationale Monégasque pour l'UNESCO, B.P., 9, Monaco.

**FIRST-AID FROM THE SKY:** Australia, which initiated the Flying Doctor service to cover vast "outback" areas is now launching another airborne medical service—First-Aid Parachuters. The St. John's Ambulance Brigade is forming its first parachute division whose members are already amateur parachutists.

**ELECTRONIC 'JELLYFISH':** An electronic apparatus designed by biophysics scientists at Moscow University, is based on the jelly-fish's aural system which picks up the infrasounds of an oncoming storm. The apparatus is able not only to forecast storms 15 hours in advance, but also to predict their force and the path they will take.

**TV IN THE KINDERGARTEN:** Children at over 100 infant schools in Venezuela now watch a daily television programme put out by the Ministry of Education over Radio Caracas, that includes plays, films and stories. Venezuelan specialists are agreed that this audio-visual teaching helps to develop creative abilities and powers of observation, aids the study of the 3 R's and expands vocabularies.

**COMPUTER VS. LITERARY RIDDLE:** Using an electronic computer, two Harvard University mathematicians recently identified the authorship of 12 essays believed to have been written by the American statesman, Alexander Hamilton, and by James Madison (4th president of the United States) which were published anonymously in 1787 and 1788. The mathematicians fed information on the frequency of key words in the essays and in the known writing of the two men, and from the results identified Alexander Hamilton as the author of 11 of the essays.

**NEW WAY TO LEARN FRENCH:** In a Leeds (England) school a French woman teacher took a junior school class for all subjects, speaking nothing but French. After two weeks the children were able to understand all that was said to them and after nine weeks spoke French fluently, had a large vocabulary and were obviously able to think in French as well. Similar experiments in three London schools have met with equal success.

**AWARD TO UNESCO RECORD COLLECTION:** A UNESCO record collection, "Musical Anthology of the Orient" (See THE UNESCO COURIER June 1962) has received one of the awards given in 1962 by the Académie du Disque Français. The first five records in the Unesco collection present traditional and folk music of Laos, Cambodia, Afghanistan and Iran.

**SWEDES SERVING U.N. CAUSE:** At least 12,000 Swedes have so far been engaged in the United Nations supervision and control services in various parts of the world. Over 11,000 Swedish soldiers have been stationed in the Gaza district and in the Congo. Others have served in Korea and the Lebanon.

**MAN IN SPACE SYMPOSIUM:** One hundred and fifty scientists from 19 countries met recently in Unesco House, Paris, for an international symposium on environmental problems of man in space. The meeting highlighted the growing collaboration brought about by the new problems in space science between biologists, on the one hand, and physicists and engineers on the other.

## *Flashes...*

■ *Six more countries have recently joined Unesco, bringing its total of member states to* 113. *The countries, in their order of joining, are: the Mongolian People's Republic, Trinidad and Tobago, Jamaica, Rwanda, Uganda and Burundi.*

■ *A special Soviet non-magnetic ship, the "Zarya" is now on a* 32,000 *mile voyage around the world to continue magnetic mapping of the oceans that was begun during the International Geophysical Year.*

■ *Over* 630,000 *fruit and timber trees were planted in Ceylon during the first six months of last year's tree planting campaign. More than half these came from nurseries created by schoolchildren and rural societies.*

■ *The Unesco Coupon Scheme under which countries are able to buy badly-needed books, scientific and educational equipment in "hard currency" areas, paying for them in their own national currency, has had a turnover of over* $48 *million since it was launched in* 1948.

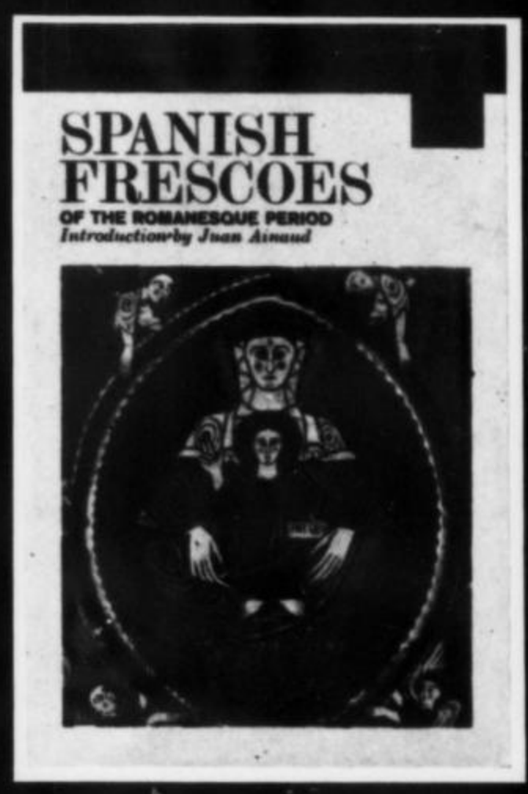
■ *An Asian Regional Institute for school building research sponsored by Unesco has been opened in Bandung, Indonesia. Other similar special centres for Asia include New Delhi (educational planners and administrators); Bangkok (Regional Office for Education) and Manila (teacher training).*



Imp. GEORGES LANG, PARIS. IMPRIMÉ EN FRANCE.

## A new publishing venture

Each volume only 95¢




Each volume contains many fine quality full-colour reproductions and other illustrations in black and white

# UNESCO ART POCKET BOOKS

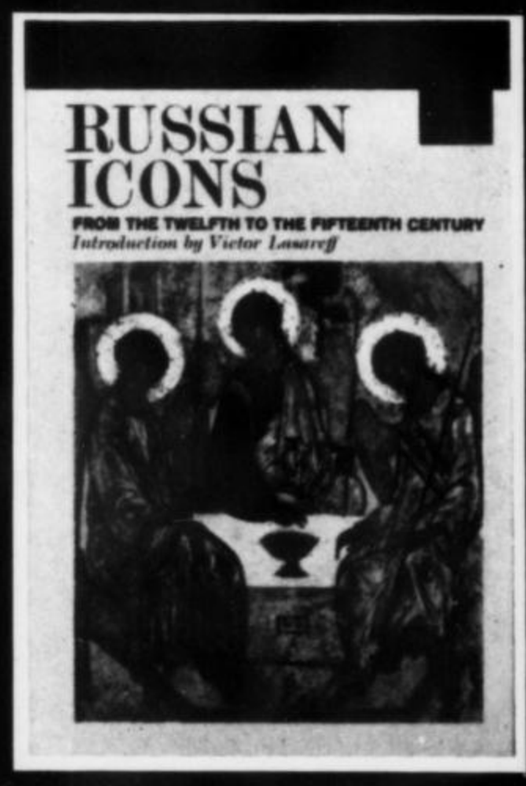
*First four titles :*

EGYPTIAN WALL PAINTINGS FROM TOMBS AND TEMPLES

PERSIAN MINIATURES FROM ANCIENT MANUSCRIPTS

SPANISH FRESCOES FROM THE ROMANESQUE PERIOD

RUSSIAN ICONS FROM THE 12TH TO THE 15TH CENTURY



*obtainable through local booksellers and usual paper back outlets*
*also from Unesco Publications Center 801 Third Avenue, New York 22, N. Y.*

UNESCO ART POCKET BOOKS are published in six languages (English, French, Spanish, Italian, German and Dutch) and in eight different editions. Published in the U.S. by The New American Library of World Literature, Inc. New York.

© Unesco

**UNESCO ART POCKET BOOKS** St. George Slaying the Dragon: a favourite subject of Russian icon painters. Here St. George has been depicted by a painter of the Novgorod School (late 14th century). This work, now in the Russian Museum. Leningrad, is one of many reproductions in full colour presented in "Russian Icons from the 12th to the 15th Century", one of Unesco's new Art Pocket Books. (See p. 26 and back cover).